

BLOOMSBURG UNIVERSITY



GRADUATE STUDIES 1990-1992





Bloomsburg University School of Graduate Studies Graduate Catalog • 1990-1992

Prepared June 8, 1990
by the Office of University Relations and Communication
Bloomsburg University of Pennsylvania
A State System of Higher Education University

Bloomsburg University is committed to Affirmative Action and Equal Opportunity.
Minorities, women, and other protected class members are urged to pursue
educational and employment opportunities at Bloomsburg University.

*Bloomsburg University reserves, for itself and its departments,
the right to withdraw or change the announcements made in this catalog.*

Accreditation...

Bloomsburg University is accredited by the
Commission of Higher Education for the Middle States Association of Colleges and Schools;
National Council for the Accreditation of Teacher Education;
National League for Nursing;
Council on Education of the Deaf;
American Speech-Language Hearing Association; and
Council on Social Work Education.
Programs have also been approved by the Pennsylvania Department of Education
and the State Board of Nurse Examiners.

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GRADUATE CALENDAR

1990 - 1991

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1990 - FALL SEMESTER

Aug. 27	Classes begin at 8 a.m.
Sept. 3	Labor Day - No classes
Oct. 5	Last day to submit application for December graduation
Oct. 24	Last day to withdraw from a class
Nov. 21	Thanksgiving recess begins at 1:50 p.m.
Nov. 26	Classes resume at 8 a.m.
Dec. 7	Last day for completion of master's thesis, departmental paper, and/or comprehensive examination
Dec. 8	Last day of classes
Dec. 10	Final examinations begin
Dec. 15	Final examinations end
Dec. 16	Commencement

1991 - SPRING SEMESTER

Jan. 14	Classes begin at 8 a.m.
Feb. 15	Final date to submit application for May graduation
March 12	Last day to withdraw from a class
March 23	Spring recess begins
April 1	Classes resume at 8 a.m.
May 3	Last day for completion of master's thesis, departmental paper, and/or comprehensive examination
May 4	Last day of classes
May 6	Final examinations begin
May 11	Final examinations end
May 11	Commencement

1991 SUMMER SESSIONS begin May 28 and end Aug. 16

1991 - 1992

1991 - FALL SEMESTER

Aug. 26	Classes begin at 8 a.m.
Sept. 2	Labor Day - no classes
Oct. 4	Last day to submit application for December graduation
Oct. 25	Last day to withdraw from a class
Nov. 27	Thanksgiving recess begins at 1:50 p.m.
Dec. 2	Classes resume at 8 a.m.
Dec. 6	Last day for completion of master's thesis, departmental paper, and/or comprehensive examination
Dec. 7	Last day of classes
Dec. 9	Final examinations begin
Dec. 14	Final examinations end
Dec. 14	Commencement

1992 - SPRING SEMESTER

Jan. 13	Classes begin at 8 a.m.
Feb. 14	Final date to submit application for May graduation
March 7	Spring recess begins at noon
March 16	Classes resume at 8 a.m.
March 18	Last day to withdraw from a class
May 1	Last day for completion of master's thesis, departmental paper, and/or comprehensive examination
May 2	Last day of classes
May 4	Final examinations begin
May 9	Final examinations end
May 9	Commencement

1992 SUMMER SESSIONS begin May 26 and end Aug. 14

The university reserves the right to adjust calendar dates as necessary. To verify dates that pertain to your program, consult your graduate adviser.

GRADUATE PROGRAMS

Master's Degree Programs

Bloomsburg University offers master's programs in the arts, business, science, and education.

The Master of Arts is offered in:

- Art Studio
- Art History
- Communication Studies

The Master of Business Administration is offered in:

- Business Administration

The Master of Education is offered in:

- Biology
- Business Education
- Elementary Education
- Reading

The Master of Science is offered in:

- Audiology
- Biology
- Early Childhood Education
- Education of the Hearing Impaired
- Instructional Technology
- Nursing
- Special Education
 (Behavior disorders, learning disabilities, mental retardation, gifted/talented, exceptional persons)
- Speech Pathology

Cooperative Doctoral Program in Education

Bloomsburg also offers a Doctor of Education in cooperation with Indiana University of Pennsylvania (IUP). This is a cooperative doctoral program in elementary education that combines the resources of both institutions. The degree is granted by IUP.



Supervisory Certificate Programs

The Supervisory Certificate Program provides front-line supervisors with the many diverse skills that are essential to administer programs and departments, and to successfully manage both professional and nonprofessional employees.

Supervisory Certificate Programs are offered in these areas:

- Communication
- Curriculum and Instruction
- Early Childhood Education
- Elementary Education

- Foreign Language
- Mathematics
- Reading
- School Health Services
- Science
- Social Studies
- Special Education

The University

SCHOOL OF GRADUATE STUDIES

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Graduate programs at Bloomsburg University of Pennsylvania will provide you with the challenge and the opportunity to use your skills and talents to the fullest. You will be encouraged to set high goals and to work hard to achieve those goals. Our programs are designed to help you attain excellence in your chosen field.

In return, Bloomsburg will provide you with the opportunity to grow and the chance to reach your full potential.

Graduate studies at Bloomsburg—in the arts, sciences, or humanities—stress critical thinking and creative problem solving. As a graduate student you will be encouraged to engage in research and to write a thesis as part of your program of study.

Whether studying full time or part time, you will be prepared to provide leadership in your profession and to make important contributions to society.

Bloomsburg University of Pennsylvania is one of 14 universities in the Pennsylvania State System of Higher Education. We have the best of both worlds: our association with the State System gives us the resources and the ability to provide excellent undergraduate and postbaccalaureate education; yet we're small enough to treat every student as an individual.

We offer 64 undergraduate programs and master's degree programs in 18 fields of study. In cooperation with Indiana University of Pennsylvania, Bloomsburg offers a doctoral program in elementary education. Educational supervisory certificates are also available.

Granted university status in 1983, Bloomsburg is organized into three colleges; Arts and Sciences, Business, and Professional Studies; and two schools, Graduate Studies and Extended Programs.

Location and Environment...

The Town of Bloomsburg is located along the banks of the Susquehanna River, about 80 miles north of Harrisburg. You'll find a delicate balance in Bloomsburg—the kind of country living and friendliness you'd expect from a community of 12,000; along with the cosmopolitan flavor of a university campus of 6,500 full-time students from both rural and urban areas throughout the Commonwealth and across the nation. The School of Graduate Studies has approximately 500 students.

Bloomsburg provides limited on-campus graduate student housing during the regular school year. In addition,

there are many fine places to live in our community. The university's Residence Life Office maintains a list of off-campus housing. Meals are available for graduate students throughout the school year at our dining facility, Scranton Commons, or you may opt for the Kehr Union snack bar. Residence halls are open to graduate students during the summer sessions. For more information about housing, contact the Director of Residence Life, Luzerne Residence Hall, Bloomsburg University, Bloomsburg, PA 17815, (717) 389-4089. Bloomsburg is served by two interstate bus lines, and two community airports are within an hour's drive.



ACADEMIC SUPPORT SERVICES

Harvey A. Andruss Library...

The Harvey A. Andruss Library at Bloomsburg houses more than 307,000 bound volumes, 1.4 million microtexts, 1,382 periodicals and a 375-volume rare book collection. The library also has federal, state, and local government documents, a collection of more than 5,600 phonograph records, a pamphlet file of approximately 7,600 items, a juvenile and young adult book collection, and a special collection of first editions, autographed copies, and illustrated books. On-line access to more than 300 information databases through DIALOG and VU/TEXT is available. Databases cover most fields and are particularly thorough in the areas of business and the sciences and for bibliographic citations of journal articles.



Curriculum Materials Center...

The basic objective of the Curriculum Materials Center is to locate, acquire, catalog, and make accessible curricular and instructional materials to preservice and inservice teachers. The resources housed in the center include elementary and secondary textbooks, a multicultural curriculum materials collection, curriculum guides, games, instructional materials kits, tests, and computer software. A cluster of Macintosh microcomputers and a laser printer are also available.

Reading Clinic...

The Reading Clinic offers free diagnostic evaluation to children and adults. After evaluation, remedial counseling and instruction are provided, if desired, including parent counseling. This is a year-round service.

Speech, Hearing, and Language Clinic...

This clinic provides a number of free services to students, faculty, staff, and the community. Available services

include speech, voice, language, and hearing evaluation, educational-psychological training, speech reading, educational therapy for the hearing impaired, and parent counseling.

Institute for Interactive Technologies...

The Institute for Interactive Technologies (IIT) provides research, training, education, and entrepreneurial assistance to solve training and operational problems that occur in education and industry through the application of various interactive technologies. IIT designs, develops, and produces interactive technology-based applications that include computer-based interactive video disc, artificial intelligence, and expert systems and computer-aided design systems. IIT also provides workshops for interactive video training and opportunities for assistantships for graduate students in the Master of Science program in instructional technology.

Institute for Comparative and International Management Studies...

The Institute for Comparative and International Management Studies (ICIMS) has been created to fulfill Bloomsburg University's missions and goals through sponsorship and initiation of activities aimed at increased understanding of cross-cultural and comparative management issues. The institute initiates, coordinates, and administers joint degree programs with overseas universities in business administration; sponsors management research projects within the U.S. and at overseas sites; provides consulting services and workshops in all areas of management; and develops and administers quality executive development and training programs as required by a particular country.



Television and Radio Services...

The Office of TV/Radio Programs and Services operates the university's television and radio facilities in the McCormick Human Services Center, and provides a range of services including preparation and production of videotape courseware for instructional support. It is a resource center for video teleconferencing programs and information, and it provides on-location or in-studio taping of lectures, presentations, and other academic activities as well as off-air recording of broadcast or satellite programs for classroom use.

Academic Computing Facilities...

Academic computing facilities are located throughout the campus. The main clusters of general access computer labs and work areas are in Ben Franklin Hall and McCormick Human Services Center. Classrooms and laboratories in Sutliff Hall and Bakeless Center for the Humanities also house computers. The specialized laboratories and small clusters

are located in Hartline Science Center and Navy Hall.

The student lab in Room 1148 of McCormick has an AT&T 3B15 mini-computer with 35 AT&T 6300 PCs directly connected to it. An AT&T 3B2 also is located in the room and is connected to the 3B15. Room 1146 houses PCs and a cluster of Apple IIe computers.

The Ben Franklin student lab areas are in Rooms 1, 2, and 3. Room 1 is configured with PCs that can operate as terminals to the Sperry 1000 computer located nearby. Room 2 has a cluster of Macintosh computers networked to a laser printer. Room 3 has a cluster of Zenith and IBM computers. These microcomputers are attached to printers and are used by students for programming, word processing, and other related coursework.

Students are permitted to connect their personal micros or terminals to either the 3B15 or the Sperry 1100 to do work from their residence halls, local addresses, or homes. Such units are linked by modems over telephone lines.

The work areas are supported by student consultants who are available to help students with problems in using the equipment and software in the lab area. Students also work as programmers, operators, and aides helping to support academic and administrative computer needs at the university.

During the fall and spring semesters, access to the general access work areas is normally 7:30 a.m. to midnight, Monday through Friday; noon to 5 p.m., Saturday; and noon to midnight, Sunday.

The AT&T 3 B15 is a multi-user system. It has 35 terminal connections and 15 modems for dial-in access. Languages on the system include C, FORTRAN, COBAL, and Lisp. The Ingres database and Q-Office systems also are used for instructional purposes.

The Sperry system is the university's administrative computer, but is used by students and faculty for instruction and research. It is accessed by 30 terminal connections and 16 modems. The statistical programs, SPSS and BMD/BMDP are available on this system.



ADMISSION INFORMATION

Entrance requirements to graduate studies at Bloomsburg University vary according to the program to which you apply. Details of specific degree program requirements are discussed under the program descriptions presented later in this catalog.

Minimal Entrance Requirements...

Minimal requirements for applicants for graduate study include an undergraduate quality point average (Q.P.A.) of at least 2.5 on a 4.0 scale and possession of a baccalaureate degree from an accredited college or university. In addition, most applicants will be required to take either the Graduate Record Exam, Miller Analogies Test, National Teacher Examination, or Graduate Management Admissions Test as required by the program.

Application...

To pursue any graduate program of study, either degree or non-degree, an individual must complete an *Application for Admission to Graduate Studies*, pay the \$15 application fee, and have an official transcript of all undergraduate grades sent to us directly from the institution from which you graduate. In addition, an individual seeking admission to a degree program may need to fulfill any additional requirements established by the department which offers the degree program. The application with the \$15 fee is sent to the Business Office, Waller Administration Building. Transcripts and other supporting documentation are to be sent to the Graduate Studies Office and not the department to which you are applying. Completion of the admission process is required before the student is permitted to enroll for classes. Therefore,

it is advised that prospective students complete application as soon as possible prior to the semester in which they intend to enroll.



For more information regarding admission to graduate studies and an application form, contact the Office of Graduate Studies, Room 109, Waller Administration Building, Bloomsburg University, Bloomsburg, PA 17815; telephone (717) 389-4015.

Foreign Applicants...

Individuals from foreign countries must complete a separate *Graduate Admissions Application for International Students*. This application form is available from the Office of Graduate Studies, Room 109, Waller Administration Building, Bloomsburg University, Bloomsburg, PA 17815, U.S.A. International applicants must have the results from the Test of English as a Foreign Language (TOEFL) submitted directly to

the Graduate Studies Office from the Educational Testing Service, P. O. Box 6151, Princeton, NJ 08541-6151, U.S.A. Bloomsburg University requires a minimum score of 550 on the TOEFL. Results from the test taken more than two years prior to the date submitted will not be considered. Acceptance to the university as a graduate student does not constitute a guarantee of financial assistance.

Testing...

Graduate students will be required to complete any testing required by their department, i.e., Miller Analogies Test, Graduate Record Examination (G.R.E.), National Teacher Examination (N.T.E.), Graduate Management Admissions Test (G.M.A.T.). Any fees for testing must be paid by the student.

Graduate Student Categories...

Graduate students at Bloomsburg University may be admitted into one of the following four categories:

NON-DEGREE (Category 510)

Persons who desire graduate level university instruction, but do not intend to earn a master's degree, may be admitted as non-degree students provided they present official transcripts denoting graduation from an accredited undergraduate college or university. This is the category for students who are auditing a course or enrolled in the supervisory certificate program. Non-degree students may apply to the Graduate School for transfer to provisional or regular status. However, no more than 12 semester hours earned as a non-degree student may be later applied toward a master's degree, except when special permission is granted by the Assistant Vice President for Graduate Studies and Research.

PROVISIONAL

(Category 520/530)

A student may be admitted as provisional in a degree program when he/she possesses a baccalaureate degree but does not meet the criteria for regular admission. The student may have an undergraduate scholastic record which shows promise, but less than the 2.5 Q.P.A. required for regular admission. The reasons for a student's provisional status will be specified in the letter of admission. A provisional student must earn a minimum Q.P.A. of 3.0 in the first six to nine semester hours of graduate study at Bloomsburg University in order to be eligible for regular student status. If this Q.P.A. requirement is attained, transfer to regular student status is automatic upon certification by the student's adviser that all deficiencies are corrected. If not attained, the student is subject to dismissal procedures.

REGULAR

(Category 540)

A regular graduate student is a degree-seeking student who meets all criteria for regular admission to a program of her/his choice. The student must possess a baccalaureate degree from an accredited college or university; must have an undergraduate Q.P.A. of at least 2.5 on a 4.0 scale; have scores on the Graduate Record Examination (G.R.E.), Graduate Management Admissions Test (G.M.A.T.), Miller Analogies Test (M.A.T.), or National Teachers Examination (N.T.E.) that are acceptable to the program of her/his choice; have met all the criteria established by the degree program; and be under no requirements to make up deficiencies. Only a regular graduate student is eligible for admission to candidacy for a master's degree (see page 13). Regular graduate students must

maintain a minimum Q.P.A. of 3.0. If a regular graduate student is not admitted to master's candidacy after completing 12 semester hours, he/she may be transferred to non-degree status or be subject to dismissal procedures at the discretion of the Assistant Vice President for Graduate Studies and Research.

DEGREE CANDIDATE

(Category 550)

Upon admission to candidacy for a master's degree, students are placed in a new category. If a student does not maintain a 3.0 Q.P.A. or if the student does not complete the graduate program in six years, then he/she can be transferred to non-degree status or be subject to dismissal procedures. Exceptions to this policy are with the approval of the Assistant Vice President of Graduate Studies and Research.

Readmission...

If a graduate student has not enrolled in any graduate course for a two-year period, the student's record is marked withdrawn and placed in the inactive files. A new application and \$15 fee must then be submitted for reactivation.

Graduate Courses in the Senior Year...

Current Bloomsburg University undergraduates may register for graduate courses under certain conditions. First, they can only take a graduate course during the semester they will complete their undergraduate degree, and, they must need less than a full load of classes to graduate. Secondly, a recommendation from their undergraduate adviser is required. These students must follow the regular graduate application process.

Audits...

You may audit a graduate course for self-improvement. Follow the regular graduate application process, pay all the required fees, and obtain the approval of the Assistant Vice President for Graduate Studies and Research. When you audit a course, you are not required to take tests. Upon completion of an audited course, a grade of V is recorded on your transcript.

Off-campus Courses...

Bloomsburg often offers graduate courses at other locations in the Commonwealth. These graduate courses are open to students who are not enrolled in a master's program at Bloomsburg University; however, these students must obtain approval from the Assistant Vice President for Graduate Studies and Research to enroll in these classes and must complete an application for admission to Graduate Studies prior to the completion of the semester in which they are enrolled.

Tuition...

If you are a Pennsylvania resident, your cost will be \$121 per semester hour for under 9 and over 15 semester hours; for 9 to 15 semester hours, your cost will be \$1,089 per semester (cost is subject to change). Out-of-state residents will pay \$144 per semester hour for under 9 and over 15 semester hours, and \$1,299 per semester for 9 to 15 semester hours (also subject to change).

Other Required Fees...

A student union fee of \$2.50 is required if you are taking from 1 to 4 semester hours; \$5 if you are taking from 5 to 8 semester hours; and \$10 if you are taking 9 or more semester hours.

A student health service fee of \$20 is obligatory if you are taking 9 or more semester hours. Those who are taking 8 or less semester hours do not have to pay this fee.

An academic equipment fee of \$25 per semester is required for if you are taking 12 or more semester hours, or \$2 per semester hour for 1 to 11 semester hours.

Bloomsburg's graduation and diploma fee is \$10. (This does not cover the cost of renting academic regalia).

Late registration fee is \$10.

The university has an optional activities fee. The fee gives you the use of various recreational facilities on campus. It costs \$35 for two semesters or \$20 for one semester; the cost during summer sessions is \$2 per week.

Please be aware that all fees are subject to change without notice.

Refunds...

If you must withdraw from a course, you might receive a partial refund of course fees, depending on when you withdraw. Through the second week, you will receive 80 percent of your fee; in the third week, 70 percent; in the fourth week, 60 percent; and in the fifth week, 50 percent. There is no refund after the fifth week. All withdrawals require the approval of the Assistant Vice President for Graduate Studies and Research.

Financial Help/Assistantships...

Bloomsburg University provides several options to help graduate students financially.

Graduate Assistantships—Graduate assistantships are available for full-time students. The number of assistantships in any particular program or department is variable and subject to change according to university needs. Stipends are awarded by the Assistant Vice President for Graduate Studies and Research upon the recommendation of departments having graduate programs. Stipends are available during the academic year and the summer sessions. Most students are granted assistantships for one semester at a time. A few graduate students, however, are granted assistantships under a two-semester contract.

Assistantships are either "half-time" which require 20 hours of work each week or "quarter-time" which require 10 hours of work each week. Both types of assistantships carry a full waiver of tuition. In addition, half-time graduate assistants receive a stipend of \$2,117.50 for the semester while quarter-time graduate assistants receive a \$1,058.75 stipend for the semester. Summer stipends are \$825.24.

Minority Graduate Assistantships—As part of the university's commitment to Affirmative Action, 10 graduate assistantships are targeted for minority graduate students. Blacks and other persons of color are encouraged to avail themselves of the opportunity to apply for these assistantships. The requirements and conditions of appointment for these assistantships are identical to regular assistantships.

Applications for regular and minority graduate assistantships are available at the Office of Graduate Studies and should be submitted to the department

or program to which you are applying. Upon award of a graduate assistantship, you will be provided with the document *Criteria for Graduate Assistantship* by the Office of Graduate Studies. This document describes Graduate School policies for the administration of assistantships.

Other Forms of Aid...

Some federal fellowships may be available in selected fields of study. Program coordinators should be contacted with regard to these. In addition, the Pennsylvania Higher Education Assistance Agency Loan Program is available as is the student work-study program. For more information regarding these forms of financial aid, contact Office of Financial Aid, Ben Franklin Building, Bloomsburg University, Bloomsburg, PA 17815.



ACADEMIC POLICIES

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Here are the responsibilities of a graduate student at Bloomsburg University:

- Each student will take responsibility for satisfying requirements for graduation in his or her field.
- While graduate advisers and staff will assist students, decisions on courses and other matters rest with the student.
- Each student should identify any undergraduate weakness or deficiency and discuss them with graduate advisers. (Such weaknesses might include, but are not limited to, not having proper undergraduate prerequisites for the desired graduate program.)
- Students are expected to attend all classes and take all examinations.

Absences from graduate classes are granted only for urgent and verifiable reasons; students granted an absence from class can expect assistance from professors in making up work or examinations.

Advisers...

Students who are provisional, regular, or candidates for a degree, along with students enrolled in the Supervisory Certificate Programs, are assigned graduate advisers.

The duties of the adviser are:

- to serve as a consultant in planning your program;
- to help you choose courses;
- to certify the courses you do choose as part of your degree program;
- to endorse your application for degree candidacy;
- and to arrange for a comprehensive examination (if required by the graduate program you choose).

Upon acceptance into a program of study, the program coordinator is usually

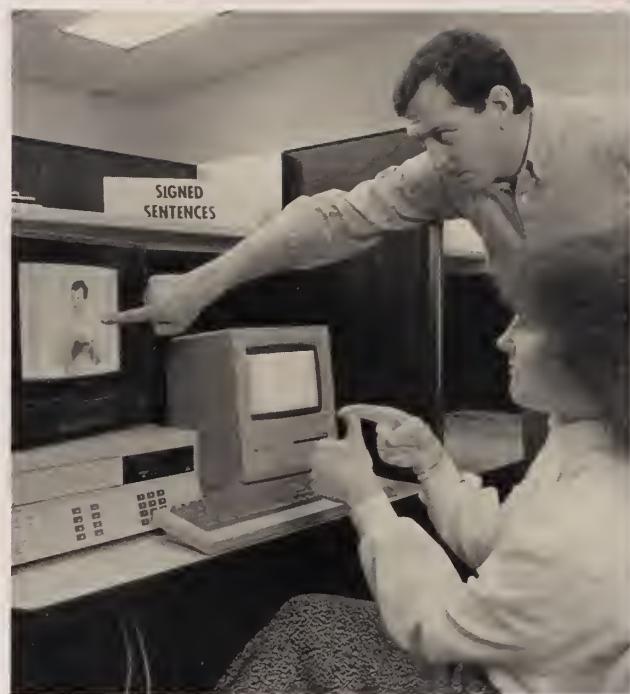
assigned as a temporary adviser. A permanent adviser is selected by the student and temporary adviser taking into account the student's research and career interests. If this individual accepts the student as advisee, she/he is formally appointed permanent adviser by the Assistant Vice President for Graduate Studies and Research upon recommendation of the department involved.

Non-degree students are not assigned advisers. They may regard the Assistant Vice President for Graduate Studies and Research as their adviser for choosing courses and interpreting academic regulations.

Scheduling, Registration, and Course Information...

Students register for graduate courses through the Registrar's Office, except for students in non-degree status who submit their registration materials directly to the Office of Graduate Studies.

The course load each semester for a full-time student is 12 semester hours. For students employed full-time, however, the maximum course load each semester is 6 semester hours. For half-time graduate assistants, the course load is 6 to 9 semester hours; for quarter-time graduate assistants, 9 to 12 semester hours.



For summer sessions, the recommended course load is 1 semester hour per week of full-time coursework. (For example, if the summer session is six full weeks, the maximum course load during that session is 6 semester hours).

Credit is measured in terms of semester hours, at the rate of 1 semester hour for 15 hours of lecture/discussion work plus final examinations.

Courses numbered 500 or higher in this catalog (the last three digits of the course number) are graduate courses. Courses numbered lower than 500 that are listed in this catalog are open to both graduate students and advanced undergraduates. Graduate students may apply only 12 semester hours of courses numbered 400 to 500 that are listed in this catalog toward a master's degree.

Transfer of Credits...

Graduate students may transfer up to 9 semester hours in graduate courses taken at another approved college or university with the approval of the adviser and the Assistant Vice President for Graduate Studies and Research. You must have taken the course(s) in residence and the content of the course(s) must match the required areas of study in your master's program at Bloomsburg. Also, you must have earned a grade of B or higher. Credit for a pass/fail grade is not transferable. A maximum of 12 semester hours may be transferred from graduate programs at Bloomsburg University toward a second master's degree.

Grades...

Grades for graduate courses are:

A—Distinguished, scholarly work that exhibits independence and intellectual maturity (4 quality points)

B—Good (3 quality points)

C—Fair, acceptable work toward a master's degree program, within limits (2 quality points)

D—Not acceptable work toward a master's degree program (1 quality point)

E—Failing work (0 quality points)

F—Failing grade in thesis/research

I—Incomplete; work must be completed within four months unless the Assistant Vice President for Graduate Studies and Research extends the period for adequate reason. If the work is not made up, the grade is changed to N, and the student is denied further opportunity to complete the work.

P—Passing grade in thesis/research

RI—Removal of an incomplete grade

N—No grade, no credit

R—Research in progress.

W—Withdrawn with approval of the

Assistant Vice President for Graduate Studies and Research

The graduate student must apply to the Assistant Vice President for Graduate Studies and Research for permission to withdraw. If this permission is requested before midpoint of the semester, the grade is W. If the withdrawal is after the midpoint of the semester, the grade is W providing the student is passing the course, and E otherwise. The Registrar establishes the semester's midpoint.

V—Audit

CR—Course repeated

A course may be repeated only once.

To figure Q.P.A., follow this process:

1. multiply the number of quality points for each grade by the number of semester hours for that course;
2. add these points;
3. divide this total by the sum of the semester hours for all grades used in your

computation. When a course has been repeated, use only the last entry.

Examinations...

As part of your master's degree requirement, a comprehensive examination is likely to be required. Also, an examination in defense of a master's thesis is required of students who choose to write a thesis.

Master's Thesis or Departmental Paper...

Normally, the master's thesis consists of an independent scholarly investigation which includes the experience of collecting, assembling, interpreting, and presenting a body of information to solve a formal research problem in the student's academic or professional field. Alternatively, it can include the prepa-



ration and exhibition or presentation of creative works in certain programs.

If a master's thesis is included in the student's program, a committee is appointed by the Assistant Vice President for Graduate Studies and Research from individuals nominated by the student's adviser. A "Form for the Appointment of a Thesis Committee" is available for this purpose from the Office of Graduate Studies. The committee guides the study, approves the thesis in both form and content, arranges for the defense, certifies satisfactory completion of the thesis, and determines the grade. Information about "Master's Thesis: Procedures" is available from the Office of Graduate Studies and should be read by all graduate students prior to beginning work on a thesis project.

Some master's degree requirements include a departmental paper. Such a paper is interpreted as one that grows out of a course and therefore does not require special registration or carry its own credit. Completion of a departmental paper must be certified by the advisor as part of the application for graduation.

Admission to Candidacy...

Students must meet the following conditions for admission to candidacy for a master's degree:

- The student must be admitted as a regular graduate student.
- Transcripts of all undergraduate and previous graduate study must be on file with the Assistant Vice President for Graduate Studies and Research.
- Students should apply for candidacy after completing 9 semester hours of graduate work; students *must* apply for candidacy on a form available from the Office of Graduate Studies before com-

pleting 12 semester hours. Under certain circumstances, the Assistant Vice President for Graduate Studies and Research may grant an extension.

- Student's must have a minimum Q.P.A. of 3.0.
- The application must be endorsed by the student's adviser.
- Students applying for candidacy for the Master of Education program must have evidence of a valid teaching certificate.



Your admission for candidacy to a master's degree program might be deferred if courses you need are unavailable because of limited class size. If this happens, you will be put on a priority waiting list for required courses.

Once you have been accepted as a candidate for a master's degree, you are eligible to use the service of Bloomsburg University's Career Development and Placement Center.

Time Limitation...

Each student is expected to complete

the requirements for a master's degree within six calendar years. This includes courses accepted by transfer. Bloomsburg University will grant extensions for sufficient reason, upon application to the Assistant Vice President for Graduate Studies and Research and with the approval of the student's adviser. This extension must be requested before the six-year period ends.

Graduation Requirements...

Each program that leads to a master's degree at Bloomsburg University requires at least 30 semester hours of graduate credit. Courses with grades below C earn no credit toward a master's degree.

You must have a cumulative Q.P.A. of 3.0 or higher to graduate with a master's degree from Bloomsburg University.

The Graduate Calendar on page 4 of this catalog gives deadlines for applying for graduation, completion of thesis and departmental papers, comprehensive examinations, etc. These are deadlines, but you should plan to complete each segment before the due date, whenever possible.

Students who are completing their degree programs must apply for graduation at the Office of the Registrar, Room 6, Ben Franklin Hall, telephone (717) 389-4263, and pay the graduation fees **prior** to the deadline listed in the university calendar.

You may request a graduate transcript through the Registrar's Office. This may be done by letter, or by filling out a form available at the Registrar's Office. The cost per transcript is \$2.

DEGREE PROGRAMS



MASTER OF ARTS in Art History in Art Studio

Program Coordinator: Robert Koslosky, Ph.D.
(717) 389-4854

Program Description

The Master of Arts program in art history develops an advanced knowledge base, writing proficiency, and research skills enabling the student to pursue a variety of professional options. A minimum of 30 semester hours is required including a thesis based on the student's area of interest. In conjunction with the student's committee, an individualized program of study is designed. Opportunities for interdisciplinary and off-campus experience are available.

The Master of Arts program in art studio emphasizes the development of creative and scholarly competencies in one or more of the following studio areas: drawing, crafts, ceramics, graphics, painting, or sculpture with concurrent or parallel work in the areas of art history, philosophy and psychology of art, art education, and visual aesthetics for a minimum of 30 semester hours.

Faculty Research Interests

Karl A. Beamer, M.F.A., associate professor.
Ceramics/sculpture

Carol B. Burns, M.F.A., assistant professor.
Crafts

Gary F. Clark, M.A., assistant professor.
Computer/video technology

Robert B. Koslosky, Ph.D., associate professor.
Art education/art history

Stewart L. Nagel, M.F.A., professor.
Graphics

Christine M. Sperling, Ph.D., assistant professor.
Renaissance art history

Barbara J. Strohman, M.F.A., associate professor.
Drawing

Vera L. Viditz-Ward, M.F.A., assistant professor.
Photography

Charles T. Walters, Ph.D., assistant professor.
American/Oriental art history

Kenneth T. Wilson, M.S., associate professor.
Painting

Special Requirements of the Program

For Admission...

Students may apply under two admission plans. Plan I is tailored for individuals who have earned a bachelor's degree in art (B.A., B.F.A., or B.S. in art education) from an accredited institution of higher education. Plan II is for individuals who have not graduated with a curriculum in art. In addition to meeting the general admission requirements for the School of Graduate Studies, these applicants must also comply with program requirements established by the Department of Art.

Initial admission materials must include official academic transcripts of all undergraduate coursework and a one-page statement of the applicant's objectives and philosophy. Those choosing the master's degree in art studio need to submit an 8" x 10" plastic sleeve of slides representative of their creative work. Upon acceptance, students are required to appear for a personal interview with the department chairperson, program coordinator, and an adviser in their major field. At this time, any deficiencies in the applicant's background will be noted and an appropriate course of study outlined. A thesis and an exhibition of creative work are required for art studio majors.

For Retention and Candidacy...

Requirements of this program are the same as those for the School of Graduate Studies.

For Graduation . . .

Art studio majors will choose an area of concentration consisting of four levels of the selected specialization along with selected elective courses as suggested by their committee. Art history majors will specialize in an area of study along with advanced general studies. A minimum of 30 semester hours is required; this number may be exceeded depending on the student's program.

All other graduation requirements for this program are the same as for the School of Graduate Studies.

Areas of Concentration for Advanced Study

The seven areas of concentration available to graduate students for advanced study in art studio include:

- 32.500, 01, 02, 03 Advanced Ceramics I, II, III, IV
- 32.510, 11, 12, 13 Advanced Drawing I, II, III, IV
- 32.520, 21, 22, 23 Advanced Crafts I, II, III, IV
- 32.530, 31, 32, 33 Advanced Graphics I, II, III, IV
- 32.540, 41, 42, 43 Advanced Painting I, II, III, IV
- 32.550, 51, 52, 53 Advanced Sculpture I, II, III, IV
- 32.580, 81, 82, 83 Advanced Photography I, II, III, IV
- 32.595 Directed Study in the Studio Arts

Graduate Courses in Art History

- 31.560 Readings and Research in Contemporary Art History
- 31.565 Readings and Research in American Art History

- 31.570 Readings and Research in European Art History
- 31.575 Readings and Research in Oriental Art History
- 31.580 Readings and Research in Architectural Art History
- 31.585 Art and Culture of France
- 31.592 Readings and Research in Advanced Visual Aesthetics
- 31.595 Directed Study in Art History
- 30.590 Current Theories in Art and Art Education
- 30.591 Visual Arts of the Exceptional Child
- 30.595 Master's Thesis

The preceding courses in art studio and art history carry 3 semester hours, except for 32.595 Directed Study which carries variable credit and 30.595 Master's Thesis with 3 to 6 semester hours.

Art Gallery, Permanent Art Collection, and Slide Collection

The department operates the Haas Gallery of Art, which features monthly exhibitions of varied art forms. A special exhibition of student art work is held annually, and an exhibition organized and planned by students in the art gallery course is held in the spring of each year. In addition, an art student intern maintains a small art gallery space in the Presidents' Lounge of the student union.

The Department of Art maintains an extensive permanent art collection of more than 300 pieces with works displayed throughout the campus. In the seminar room, a student slide curator assists in classifying, cataloging, and filing over 40,000 units contained in the department's 35mm slide collection.



MASTER OF ARTS in Communication

Program Coordinator: Mary Kenny Badami, Ph.D.
(717) 389-4188

Program Description

The purpose of this program is to enhance the understanding of the philosophy, theory, and practice of the means by which human beings exchange information, ideas, and values through personal or mediated interaction. Using a variety of research tools, students discover the role communication plays in interpersonal, small group, public, and organizational situations. A master's degree in communication prepares graduates for doctoral study in communication and for careers in a number of areas including business, law, medicine, education, government, media, public relations, advertising, arts and entertainment, social and human services, high technology industries, and international relations and negotiations.

Faculty Research Interests

Richard D. Alderfer, Ph.D., professor.
Communication pedagogy, nature of communication, interpersonal communication, and vocal processes

Mary Kenny Badami, Ph.D., professor.
Male-female communication patterns and strategies, intercultural communication, and communication training in organizations

Dale A. Bertelsen, Ph.D., assistant professor.
Function and influence of rhetoric in contemporary society, in particular, rhetorical theory and the criticism of public discourse, political communication, nonverbal communication, communication technologies, television, literature, films, and systems and symbols

Howard N. Schreier, Ph.D., associate professor.
Contemporary rhetorical theory and criticism and persuasion in the popular culture

Harry C. Strine III, M.A., associate professor.
Public communication, business communication, small group communication, and forensics

James E. Tomlinson, M.A., associate professor.
Organizational and political communication, and the impact of communication technology on society

Special Requirements of the Program

For Admission...

In addition to meeting the general admission requirements for the School of Graduate Studies, applicants for the Master of Arts in Communication program must submit:

• Graduate Record Examination scores (a minimum combined score of 950 on the verbal and quantitative tests).

• Three letters of recommendation from individuals who have the knowledge to comment on the applicant's potential to successfully complete a graduate program.

• Evidence of completion of two to three basic communication studies courses including, but not limited to, public speaking, interpersonal communication, persuasion, business communication. Applicants without such preparation will be expected to enroll as auditors in 25.104 Interpersonal Communication and/or other course(s) as determined by the Graduate Committee.

• A one-page statement describing the applicant's objectives, goals, and direction for enrolling in the program.

Applicants who do not meet all of the requirements may request an interview with program faculty to discuss special circumstances or may petition, in writing, for a waiver of select entrance requirements.

For Retention...

In addition to meeting the general retention requirements for the School of Graduate Studies, a graduate student in communication must earn a minimum grade of B in each of the four core courses to remain in good academic standing. Students may be given the opportunity to retake a course after review of special circumstances by program faculty.

For Graduation...

• A minimum of 30 semester hours in graduate-level courses is required for graduation. The following core courses are required for this degree program:

Required Courses (12 semester hours)

- 23.501 Nature of Communication
- 23.502 Interpersonal Communication
- 25.445 Organizational Communication
- 25.501 Introduction to Communication Research

Elective Courses

A minimum of 9 semester hours offered by the Department of Communication Studies may be elected.

- 25.502 Rhetorical Criticism
- 25.585 Special Topics in Communication
- 25.586 Special Topics in Communication
- 25.587 Special Topics in Communication

Special Topics courses include interviewing theory, political communication, nonverbal communication, communication and conflict, small group communication, intercultural communication, communication and the sexes, communication, technology and society, communication training in the organization, cultural foundations of the information society, rhetoric in a mediated society, and the rhetoric of social movements.

Nine semester hours offered in other departments as

approved by the student's adviser may be elected.

45.500	Sociology of Mass Communication
46.440	Language and Culture
48.451	Laboratory Training in Group Processes
48.453	Organizational Psychology
53.580	Programming for Interactive Video
93.583	Human Resources Development

• A thesis or a departmental research paper is optional but strongly recommended for those seeking advanced study beyond the master's degree.

• A comprehensive examination is required. At the conclusion of the semester in which the student completes 24 semester hours of coursework, an application for the test must be filed. The examination is a six hour essay test that examines the candidate's knowledge of philosophy, theory, and application of material covered in any three of the four core courses and other courses the candidate has taken to that point. In the event of failure on the examination, or any part thereof, the student will be given one opportunity to retake the part(s) failed.

MASTER OF BUSINESS ADMINISTRATION

Program Coordinator: Howard J. Kinslinger, Ph.D.
(717) 389-4397

Program Description

The Master of Business Administration (M.B.A.) at Bloomsburg University is an all-evening program which offers four courses each semester and selected courses during the summer sessions for both full-time and part-time students. The degree program is planned to reflect the curriculum standards of the American Assembly of Collegiate Schools of Business. It is oriented toward the decision-making responsibilities of management. Consequently, it is broad-based and aims to develop a perspective by providing an opportunity to elect courses in an area of specialization. The program is administered by a program coordinator who also serves as the faculty adviser for all M.B.A. students.

Faculty Research Interests

Mainuddin Afza, Ph.D., associate professor.
Small business, policy and strategy

M. Ruhul Amin, Ph.D., associate professor.
Small business, organizational behavior and development, operations management, international management

Richard L. Baker, Ph.D., professor.
Governmental accounting, accounting education

Frank S. Davis, Ph.D., professor.
Artificial intelligence-simulation of human characteristics

Bernard C. Dill, D.B.A., professor.
Finance management, organization structure, personal finance, pension planning

Mary K. Erickson, Ph.D., associate professor.
International consumer/business behavior

E. Burel Gum, D.Ed., associate professor.
Fund accounting

David G. Heskel, Ph.D., associate professor.
Dividend policies, international finance

Charles J. Hoppel, Ph.D., associate professor.
Advanced systems development methodologies using CASE technology, application of expert systems/artificial intelligence, relational database design

Dennis B. Hwang, Ph.D., associate professor.
International accounting systems and issues

Howard J. Kinslinger, Ph.D., associate professor.
Job satisfaction vis-a-vis work variables

Salim Qureshi, Ph.D., assistant professor.
Marketing in nonprofit organizations, NPOs, models of industrial buyer behavior models

Nurur Rahman, Ph.D., associate professor.
International marketing and distribution, strategic management, logistics, consumer behavior

Bruce L. Rockwood, J.D., associate professor.
Banking law, torts, and products liability, international legal environment of business, reform of UCC

Peter B. Venuto, Ph.D., professor.
Organizational behavior, managerial communication

Melvyn L. Woodward, Ph.D., professor.
Strategic studies

Robert P. Yori, Ph.D., professor.
Internal control, determining audit sample size

Special Requirements of the Program

Enrollment in the program is limited; therefore, admission to courses is selective. The applicant must hold a baccalaureate degree from an accredited college or university. While no specific undergraduate major is prescribed, a minimum of 30 semester hours of background courses in basic business subjects is required.

For Admission...

Admission criteria include the Graduate Management Admissions Test (G.M.A.T.) score, the undergraduate record, the statements of two references, and a statement of job experience. The overall Q.P.A. for undergraduate work must be 2.50 or higher; or if based only on the last two years of undergraduate work, must be 2.75 or higher. Requirements are based on a combination of the undergraduate Q.P.A. and G.M.A.T. score. A minimal score of 950 must be achieved based on the formula: 200 times the Q.P.A.

plus the G.M.A.T. score; or at least 1,000 points based on the formula: 200 times the last two years of undergraduate Q.P.A. plus the G.M.A.T. score.

For Retention and Candidacy...

Requirements for the M.B.A. program are the same as those for the School of Graduate Studies.

For Graduation...

The M.B.A. program is comprised of two levels of courses. Level I consists of background courses or experiences that are prerequisites to Level II. Students with an undergraduate major in business administration are likely to have had most Level I courses; they may be exempted from courses that duplicate undergraduate work. Level I must be completed before beginning Level II work. Level I courses include Financial Accounting or Principles of Marketing, Business Statistics, Business Law, Business Finance, two semesters of Principles of Economics, and two semesters of mathematics including one semester of calculus. In the *Undergraduate Catalog*, these courses are numbered respectively: 91.220 or 91.222, 93.344, 97.310, 40.346, 98.331, 96.313, 40.211 and 40.212, and 53.123; plus one advanced mathematics course. Level II consists of 36 semester hours of which 30 semester hours are required and 6 are elected.

Required Courses (all 3 semester hours)

- 93.457 Business and Society
- 93.511 Statistical Analysis or Design
- 93.512 Managerial Economics
- 93.560 Operations Management
- 93.562 Organization Theory
- 93.563 Operations Research
- 93.566 Organizational Behavior
- 93.581 Policies
- 96.535 Financial Management
- 97.551 Marketing Management

Elective Courses (all 3 semester hours)

Two electives must be chosen from the following accounting, marketing, finance, and management courses.

- 91.501 Financial Accounting
- 91.502 Advanced Financial Accounting
- 91.503 Governmental Fund Accounting
- 91.524 Managerial Accounting
- 92.554 Management Information Systems
- 93.561 Operations Planning and Control
- 93.583 Human Resources Development
- 96.550 Security Analysis and Portfolio Management
- 96.565 Seminar in Finance

Or, courses may be taken with the permission of the M.B.A. program coordinator from the following upper level undergraduate courses:

- 42.472 History of Labor in the United States
- 93.440 Small Business Institute Seminar (Independent Study)
- 96.454 Financial Management Decisions

MASTER OF EDUCATION in Biology

Program Coordinator: George P. Chamuris, Ph.D.
(717) 389-4735

Program Description

The Master of Education program in biology is intended to enhance the competence of secondary school teachers of biology by extending their scholarship in content and method through formal courses, independent study, and research.

Faculty Research Interests

Joseph P. Ardizzi, Ph.D., assistant professor.
Fungal genetics, microbiology, and cell biology

George P. Chamuris, Ph.D., assistant professor.
Ecology, population biology, speciation and systematics of wood-inhabiting fungi

James E. Cole, Ph.D., professor.
Vertebrate ethology and allied health sciences

Judith P. Downing, Ph.D., professor.
Immunology, bacterial resistance to antimicrobial agents, and infectious diseases caused by bacteria

Phillip A. Farber, Ph.D., professor.
Cytogenetics

John R. Fletcher, M.S., associate professor.

George J. Gellos, Ph.D., associate professor.
Developmental plant morphology

Michael Herbert, Ph.D., professor.
Microbiology, environmental microbiology of food and water

Frederick C. Hill, Ph.D., professor.
Vertebrate zoology, malacology, and aquatic biology

Thomas S. Klinger, Ph.D., assistant professor.
Marine biology, physiological ecology, and biometry

Mark S. Melnychuk, Ph.D., associate professor.
Nutrition and reproductive physiology

Lynne C. Miller, Ph.D., associate professor.
Medical parasitology, parasite immunology and physiology, experimental pharmacology and toxicology

Louis V. Mingrone, Ph.D., professor.
Phytochemical systematics, floristics

James E. Parsons, Ph.D., associate professor.
Clinical microbiology, medical mycology, and allied health sciences

Robert G. Sagar, M.S., associate professor.
Ecology, ornithology, and bird behavior

Cynthia A. Surmacz, Ph.D., associate professor.
Cell physiology and exercise physiology

Margaret L. Till, Ph.D., assistant professor.
Endocrinology, adrenocortical mechanisms

Special Requirements of the Program

For Admission...

An undergraduate degree in biology with Level I Certification is required for admission to the program. Undergraduate deficiencies must be rectified prior to admission to candidacy without credit toward the degree. Scores from the general and the biology subject portions of the Graduate Record Examination are required for admission.

For Retention...

Requirements for this program are the same as those for the School of Graduate Studies.

For Candidacy...

An oral examination to assess the student's knowledge of general biology is required for admission to candidacy.

For Graduation...

A minimum of 30 semester hours in graduate-level courses is required. A minimum of 18 semester hours must be taken from 500-level courses (see list below) and include two required education courses, 60.501 Major Philosophies of Education and 79.591 Research in Education.

Either 50.591 Directed Study in Biology or 50.592 Master of Education Thesis is required to fulfill the research component. An oral defense of the research component is required; a written and/or comprehensive examination may also be required. Otherwise there are no required biology courses; all are considered elective courses.

- 50.411 Radiation Biology
- 50.431 Evolution
- 50.432 Microbial Genetics
- 50.441 Cytogenetics
- 50.450 Mycology
- 50.454 Ethology
- 50.455 Environmental Microbiology
- 50.457 Entomology
- 50.459 Ornithology
- 50.462 Plant Anatomy
- 50.463 Biological Photographic Techniques
- 50.471 Medical Parasitology
- 50.472 Cell Physiology
- 50.473 Systemic Physiology
- 50.481-.489 Advanced Special Topics
- 50.511 Systematic Zoology
- 50.521 Systematic Botany
- 50.531 Developmental Biology
- 50.532 Molecular Genetics

- 50.551 Conservation of Biological Resources
- 50.552 Limnology
- 50.553 Animal Ecology
- 50.554 Plant Ecology
- 50.556 Field Studies in Appalachian Mountains
- 50.557 Biology of Lower Vertebrates
- 50.558 Fungal Ecology
- 50.571 Endocrinology
- 50.572 Comparative Animal Physiology
- 50.591 Directed Study in Biology
- 50.592 Master of Education Thesis
- 50.593 Master of Science Thesis

Marine Science Courses

These courses are offered at the Marine Science Center, Wallops Island, Va. See page 53.

- 55.431 Ecology of Marine Plankton
- 55.500 Problems in Marine Science
- 55.540 Environmental Science Education
- 55.570 Research Cruise – Biology

MASTER OF EDUCATION in Business Education

Program Coordinator: John J. Olivo Jr., Ph.D.
(717) 389-4127/4121

Program Description

This program is designed to prepare students in the design, implementation, and management of office systems in a business environment. The program offers practical and realistic learning activities including hands-on instruction in new information technology and field-based research projects.

Faculty Research Interests

Ellen M. Clemens, Ed.D., associate professor.
Methodology and business education

Nancy A. Dittman, Ed.D., associate professor.
Business communications, international communications

Roger W. Ellis, Ed.D., associate professor.
Records and information management

Dennis O. Gehris, Ed.D., assistant professor.
Work attitude assessment, business teaching methodology,
software applications in business

John J. Olivo Jr., Ph.D., associate professor.
Ergonomics, impact of technology on organizations' policies
and procedures, telecommuting, analyzing and improving
workflow, end-user computing

Special Requirements of the Program

For Admission...

To be admitted to the program the applicant must have completed a bachelor's degree program from an accredited college or university and have fulfilled the general graduate admission criteria. This program will not lead to certification in business education.

For Retention and Candidacy...

Requirements for this program are the same as those for the School of Graduate Studies.

For Graduation...

A minimum of 30 semester hours in graduate-level courses is required. The program consists of two required courses, two courses in the restricted electives area, and an office systems emphasis consisting of six courses.

Required Courses (6 semester hours)

- 79.591 Foundations of Educational Research
- 90.581 Seminar in Business Education

Restricted Electives (6 semester hours)

- 53.575 Computer Programming for Instructional Applications
- 53.576 Computer Graphics for Instructional Applications
- 90.460 Business Education Workshop
- 90.551 Teaching Strategies in Business Education
- 90.564 Business Education Program Management and Development
- 90.599 Master's Thesis in Business Education
- 92.550 Information Processing
- 92.554 Management Information Systems

Office Systems Emphasis (18 semester hours)

- 94.500 Introduction to Office Systems and Information
Prerequisite: 94.500
- 94.510 Office Systems Applications
Prerequisite: 94.500, 94.510*
- 94.520 Administrative Office Communications
Prerequisite: 94.500, 94.510*
- 94.530 Telecommunications
Prerequisite: 94.500*
- 94.540 Training and Development in Office Systems
Prerequisite: 94.500, 94.510*
- 94.550 Integrated Office Systems
Prerequisite: 94.500-.540*

*or consent of the instructor

MASTER OF EDUCATION in Elementary Education

Program Coordinator: Lynn A. Watson, D.Ed.
(717) 389-4031

Program Description

The program enhances the professional competence of an individual as a teacher and a leader through its emphasis on integrated learning experiences in study of the child. Areas of study include elementary school curriculum and its trends, new techniques, current research, and opportunities for study in the teacher's academic field of interest.

Faculty Research Interests

Raymond E. Babineau, Ed.D., professor.
Supervision and curriculum

Chris A. Cherrington, Ph.D., assistant professor.
Reading

Neil Brown, D.Ed., assistant professor.
Supervision

Robert L. Clarke, D.Ed., assistant professor.
Supervision

Henry D. Dobson, Ph.D., assistant professor.
Computing and supervision

Gary J. Doby, Ph.D., assistant professor.
English and supervision

Hussein Fereshteh, Ph.D., assistant professor.
Foundations of education

Bonita B. Franks, Ph.D., associate professor.
Reading

Nancy G. Gilgannon, D.Ed., professor.
Measurement of education

Mary Harris, D.Ed., assistant professor.
Foundations of education

Charlotte M. Hess, Ph.D., professor.
Reading and mathematics

John R. Hranitz, Ed.D., professor.
Early childhood education and supervision

Martin M. Keller, M.Ed., associate professor.
Supervision

Gorman L. Miller, Ed.D., professor.
Mathematics and supervision

Ann Marie Noakes, Ph.D., professor.
Reading and early childhood education

William S. O'Bruba, Ed.D., professor.
Reading, early childhood education, and supervision

Edward J. Poostay, Ph.D., professor.
Reading

Donald L. Pratt, Ph.D., assistant professor.
Computing and supervision

Robert L. Remaley Jr., M.Ed., assistant professor.
School law and supervision

Lorraine A. Shanoski, Ed.D., assistant professor.
Early childhood education

Donald A. Vannan, Ed.D., professor.
Science

R. Edward Warden, M.A., associate professor.
Supervision

David E. Washburn, Ph.D., professor.
Foundations of education

Lynn A. Watson, D.Ed., professor.
Language arts and children's literature

Mary Alice Wheeler, Ph.D., assistant professor.
Supervision

Bonnie L. Williams, D.Ed., assistant professor.
Mathematics and supervision

Special Requirements of the Program

For Admission...

Applicants must satisfy the general admission requirements for the School of Graduate Studies as well as the following requirements for admission to the M.Ed. in Elementary Education program:

- Possess the Instructor Level I Certification for teaching in the elementary schools of Pennsylvania.
- Meet with the program coordinator to clarify program requirements, review academic records, and outline a plan for completing degree work.
- Take the Miller Analogies Test before completing the 9 to 12 semester hours needed for application for degree candidacy (minimum score is 30).

For Retention...

Requirements of this program are the same as those for the School of Graduate Studies.

For Graduation...

Required Courses:

60.501	Major Philosophies in Education
79.591	Research in Education (or adviser-approved alternative)
60.502	School and Society
60.506	Urban Education for the Disadvantaged
60.514	Home, School, and Community Relations 6-12 semester hours of coursework related to an

area of professional interest, e.g., early childhood education, reading, or an academic discipline.

Electives

The remaining courses needed to complete the degree program may be selected, with an adviser's approval, from those listed in this catalog. Acceptable courses are listed under the following areas: elementary and early childhood education, educational foundations, secondary education, reading, or those offered by other academic departments.

- All students seeking an M.Ed. in Elementary Education are required to demonstrate competency in writing skills by completing an in-depth research paper. This may take the form of a departmental paper or a thesis. The research paper must follow the style format of either the *Publication Manual of the American Psychological Association or Form and Style* by Campbell.

Departmental papers must be read and approved by the student's adviser and one other member of the graduate faculty. A thesis must meet the requirements of the School of Graduate Studies.

MASTER OF EDUCATION in Reading

Program Coordinator: Edward J. Poostay, Ph.D.
(717) 389-4092

Program Description

This program provides an opportunity for professionals to earn an M.Ed. in Reading and/or certification as a K-12 reading specialist in the Commonwealth of Pennsylvania. The program emphasizes attaining a knowledge base in current research, diagnosing and remediating reading problems, and improving the instructional practices of classroom teachers, reading specialists, and resource room teachers.

All graduate-level reading programs are coordinated through the Bloomsburg University Reading Clinic, which is part of the Department of Curriculum and Foundations within the School of Education in the College of Professional Studies. Established in 1957, the clinic provides free diagnostic and tutorial services for children and adults. Graduate assistantships, which provide a tuition waiver, a stipend, and require working 10-20 hours per week in the reading clinic, are available on a competitive basis through the School of Graduate Studies.

Faculty Research Interests

Edward Poostay, Ph.D., professor.
Diagnosis, remediation, parent involvement

Chris A. Cherrington, Ph.D., assistant professor.
Language arts and children's literature

Special Requirements of the Program

For Admission...

Applicants must satisfy the general admission requirements for the School of Graduate Studies as well as the following requirements for the reading specialist certificate program and the M.Ed. in Reading program:

- At least two written recommendations from any of the following references: undergraduate faculty, graduate faculty, direct-line supervisors, administrators, colleagues, or other individuals who are familiar with the applicant's academic abilities. Recommendation forms are available from the Bloomsburg University Reading Clinic.
- An interview with the program coordinator to clarify program requirements, discuss goals, evaluate academic records, and outline a long-range program. The interviewer's recommendations will be forwarded to the Assistant Vice President for Graduate Studies and Research.
- An informal writing sample, which will be handwritten during the admission interview.
- A minimum undergraduate Q.P.A. of 3.0.

• Applicants who do not have an undergraduate Q.P.A. of 3.0 may be admitted as provisional and will be required to take either the Graduate Record Examination and demonstrate a minimum combined score of 1,500 or the Miller Analogies Test and demonstrate a minimum score of 45. If required, the tests must be completed before the student completes 9 semester hours of coursework at Bloomsburg University.

For Retention...

Students must maintain a Q.P.A. of 3.0. Courses with a grade of C or lower must be repeated with a grade of B or higher.

A maximum of 9 semester hours for graduate-level coursework may be transferred from an accredited institution. Transfer courses must carry a grade of B or higher and must be completed no earlier than three years prior to admission. Transfer credits may be requested or submitted at any time within the six-year deadline for the completion of the graduate program, but require prior approval from the student's adviser and the Assistant Vice President for Graduate Studies and Research.

For Graduation...

The reading specialist certification program consists of 24 semester hours; 9 additional semester hours are required for the M.Ed. in Reading. The first eight courses in the following list are required for the reading specialist certification program. All 11 courses listed are required in the M.Ed. program. Neither program contains electives. Courses with similar content may be accepted, however, with prior approval from the student's adviser and the Assistant Vice President for Graduate Studies and Research.

- 63.540 Introduction to the Teaching of Reading
- 63.541 Diagnosis and Prescription in Reading
- 63.542 Psychological Aspects of Reading
- 63.543 Reading Clinic I
- 63.544 Reading Clinic II
- 63.545 Organization, Administration, and Supervision of Reading Programs
- 63.546 Reading in the Content areas
- 63.548 Learning Disabilities and Reading Instruction
- 63.547 Seminar in Reading
- 60.501 Major Philosophies of Education
- 79.591 Research in Education

• Students seeking an M.Ed. in Reading must complete 33 semester hours with a Q.P.A. of 3.0.

• A departmental paper is required for completion of the M.Ed. in Reading program. Students must complete an in-depth research paper related to a current issue in the field of reading education. The paper must be written in APA (American Psychological Association) style and be at least 15 pages in length.

• All program requirements must be completed within six years from the date of admission to the program. Students must reenroll for all courses which exceed the six-year program completion deadline outlined in this catalog.

Certification Requirements

Students seeking certification as a reading specialist must complete 24 semester hours with a Q.P.A. of 3.0 and take a comprehensive essay examination prepared by the faculty of the reading program. Specific guidelines for the comprehensive examination can be obtained from the student's adviser.

MASTER OF SCIENCE in Audiology

Program Coordinator: G. Donald Miller, Ph.D.
(717) 389-4436

Program Description

The purpose of the training program in audiology is to prepare graduates to provide diagnostic and rehabilitative audiological services in a variety of job settings. The program is designed to afford its graduates the academic and clinical practicum requirements necessary to receive the Certificate of Clinical Competence in Audiology (CCC-A) issued by the American Speech-Language-Hearing Association (ASHLA) as well as to meet the requirements for an audiology license as issued by the Commonwealth of Pennsylvania. Graduates of the program obtain employment in hospitals and medical centers, clinics, physicians' offices, schools, industries, and in private practice settings.

The students receive a broad based academic training and obtain practicum experience in a variety of practical settings including internship and externship sites. The student's academic experiences include evaluating and conducting research in the discipline.

Students may be accepted into the graduate audiology program with any undergraduate degree, but individuals without an acceptable undergraduate program in speech and hearing will, by advisement, be required to take prerequisite coursework and practicum as a part of their graduate audiology degree program.

Faculty Research Interests

Richard M. Angelo, Ed.D., associate professor, director of clinical services.

Basic and clinical electrophysiology; hearing aids

G. Donald Miller, Ph.D., professor, curriculum coordinator. Clinical audiology including electrophysiological evaluation; industrial audiology and hearing conservation

Special Requirements of the Program

For Admission...

- The applicant is required to submit a one-page, typed letter of intent stating professional background, experience, and rationale for wanting to be admitted to audiology.

- The applicant is required to submit three letters of recommendation with the names, addresses, positions, and telephone numbers of the references who have knowledge of the applicant's academic and clinical background.

- The applicant should arrange for an interview with the program coordinator.

- An applicant must have a baccalaureate degree from an accredited institution, with an overall grade point average of 2.8. Students who do not have an undergraduate major in the area of communication disorders will be required to satisfactorily complete certain academic and practicum deficiencies as prescribed by the faculty following individual transcript analysis.

- The Graduate Record Examination will be required of all applicants with a combined minimum score of 1450 needed for admission.

Applicants who fail to satisfy the program's requirements may be admitted on a provisional basis. In such cases, the terms of the conditional admission will be specified for the individual applicant.

For Retention...

The student must maintain a quality point average of 3.0 with a maximum of two C's throughout the graduate program. A grade of C in any clinical experience will necessitate repeating the course with a grade of B or higher.

For Candidacy...

Students must apply for admission to candidacy once they have completed 9 semester hours of coursework.

For Graduation...

- A minimum of 42 semester hours is required to complete this master's program.

Required Courses

Undergraduate Courses

- 72.200 Introduction to Audiology
- 72.300 Auditory Training and Speech Reading
- Graduate Courses**
- 72.500 Measurement of Hearing Loss
- 72.502 Physiological Methods in Audiology
- 72.504 Hearing Aids
- 72.506 Externship:
Clinical Practicum in Audiology
- 72.508 Externship:
Clinical Practicum in Audiology
- 72.510 Research in Audiology
- 72.512 Special Problems in Audiology
- 72.514 Industrial and Public Health Audiology
- 72.516 Auditory Problems in Children
- 72.518 Theoretical and Clinical Masking
- 72.520 Educational Audiology
- 72.522 Aural Rehabilitation: Theory and Practicum
- 72.524 Internship:
Clinical Methods in Audiology
- 72.525 Internship:
Clinical Methods in Audiology
- 72.526 Internship:
Clinical Practicum in Audiology
- 72.527 Internship:
Clinical Practicum in Audiology
- 72.532 Electronics and Instrumentation in Audiology

Elective Courses

- 72.528 Internship:
Clinical Practicum in Audiology
- 74.568 Communication for the Hearing Impaired
(Sign Language)

Other elective courses available via advisement.

- A thesis or departmental paper is required, with a departmental paper recommended.
- The M.S. in Audiology program has exit examination requirements. A comprehensive examination will be scheduled during the semester the student plans to graduate. Evaluation will be on a "pass-fail" basis. If a student "fails," he/she may repeat the examination. The American Speech-Language-Hearing Association examination for clinical competence may be substituted for the comprehensive examination providing the student scores 650 or better.

MASTER OF SCIENCE in Biology

Program Coordinator: George P. Chamuris, Ph.D.
(717) 389-4735

Program Description

This program prepares students for either admission to a research-oriented doctoral program in the biological sciences or employment in a biological or health-oriented profession. The program also enhances the knowledge, perspective, and experience of teachers of biology in secondary schools. A broad array of subdisciplines is represented among the faculty, providing a solid program in general biology.

The university is a member of the Marine Science Consortium. Courses in marine science are offered during the summer at Marine Science Center located near Wallops Island, Va. Graduate students may utilize this facility to take graduate-level courses in marine biology or to pursue research projects at the Bloomsburg University Marine Biology Laboratory.

Faculty Research Interests

Joseph P. Ardizzi, Ph.D., assistant professor.
Fungal genetics, microbiology, and cell biology

George P. Chamuris, Ph.D., assistant professor.
Ecology, population biology, speciation and systematics of wood-inhabiting fungi

James E. Cole, Ph.D., professor.
Vertebrate ethology and allied health sciences

Judith P. Downing, Ph.D., professor.
Immunology, bacterial resistance to antimicrobial agents, and infectious diseases caused by bacteria

Philip A. Farber, Ph.D., professor.
Cytogenetics

John R. Fletcher, M.S., associate professor.

George J. Gellos, Ph.D., associate professor.
Developmental plant morphology

Michael Herbert, Ph.D., professor.
Microbiology, environmental microbiology of food and water

Frederick C. Hill, Ph.D., professor.
Vertebrate zoology, malacology, and aquatic biology

Thomas S. Klinger, Ph.D., assistant professor.
Marine biology, physiological ecology, and biometry

Mark S. Melnychuk, Ph.D., associate professor.
Nutrition and reproductive physiology

Lynne C. Miller, Ph.D., associate professor.
Medical parasitology, parasite immunology and physiology,
experimental pharmacology and toxicology

Louis V. Mингrone, Ph.D., professor.
Phytochemical systematics and floristics

James E. Parsons, Ph.D., professor.
Clinical microbiology, medical mycology, and allied health
sciences

Robert G. Sagar, M.S., associate professor.
Ecology, ornithology, and bird behavior

Cynthia A. Surmacz, Ph.D., associate professor.
Cell physiology and exercise physiology

Margaret L. Till, Ph.D., assistant professor.
Endocrinology, adrenocortical mechanisms

- 50.551 Conservation of Biological Resources
- 50.552 Limnology
- 50.553 Animal Ecology
- 50.554 Plant Ecology
- 50.556 Field Studies in the Appalachian Mountains
- 50.557 Biology of the Lower Vertebrates
- 50.571 Endocrinology
- 50.572 Comparative Animal Physiology
- 50.591 Directed Study in Biology
- 50.593 Master of Science Thesis

Marine science courses offered at Wallops Island, Va.

- 55.431 Ecology of Marine Plankton
- 55.500 Problems in Marine Science
- 55.540 Environmental Science Education
- 55.570 Research Cruise-Biology

Thesis Option. This option is recommended for students planning to continue their studies through additional graduate or professional training. A minimum of 18 semester hours must be taken from 500-level courses. The Master of Science Thesis (50.593) accounts for 6 of these semester hours. An oral defense of the thesis is required.

Non-thesis Option. This option is tailored for students interested in non-research oriented careers. A minimum of 18 semester hours must be taken from 500-level courses. In addition, a departmental research paper based on the literature must be submitted and orally defended. Upon completion of coursework, graduate students must take a written comprehensive examination.

Special Requirements of the Program

For Admission...

A B.S. or B.A. in biology or its equivalent is required for admission to this master's program. Undergraduate deficiencies must be rectified, without credit earned toward the degree, prior to admission to candidacy. Scores from both the general and biology subject portions of the Graduate Record Examination are required for full admission.

For Candidacy...

An oral examination is required for admission to candidacy. The exam assesses the student's knowledge of general biology.

For Graduation...

A minimum of 30 semester hours of graduate-level courses is required. With the exception of the Master of Science Thesis (thesis option), there are no required courses. All courses are considered elective courses.

- 50.411 Radiation Biology
- 50.431 Evolution
- 50.432 Microbial Genetics
- 50.441 Cytogenetics
- 50.450 Mycology
- 50.454 Ethology
- 50.455 Environmental Microbiology
- 50.457 Entomology
- 50.459 Ornithology
- 50.462 Plant Anatomy
- 50.463 Biological Photographic Techniques
- 50.471 Medical Parasitology
- 50.472 Cell Physiology
- 50.473 Systemic Physiology
- 50.481-.489 Advanced Special Topics
- 50.511 Systematic Zoology
- 50.521 Systematic Botany
- 50.531 Developmental Biology
- 50.532 Molecular Genetics

MASTER OF SCIENCE in Early Childhood Education

Program Coordinator: **John R. Hranitz, Ed.D.**
(717) 389-4030

Program Description

This program is intended to enhance the professional competence of the individual as a teacher of young children. It includes integrated learning experiences in the study of the young child from prenatal through age eight, curriculum, current practice, and areas of interest to the teacher of young children. Individuals not holding any type of certification can obtain the Instructional Level I Certificate in Early Childhood Education, N, K-3. The program also has an option that enables the teacher with an Instructional Level I Certificate in Elementary Education, K-6 to obtain N, K-3, Early Childhood Education Certification.

Faculty Research Interests

John R. Hranitz, Ed.D, professor.

Child development, administration, research, theory, and curriculum practices and experiences

Ann Marie Noakes, Ph.D.,
Child development, theory, research, reading, and curricular practices and experiences

William S. O'Bruba, Ed.D.,
Child development, theory, reading, children's literature, and curricular practices and experiences

Lorraine A. Shanoski, Ed.D.,
Theory, research, and curricular practices and experiences

Lynn A. Watson, D.Ed.,
Language arts, children's literature, theory, research, and curricular practices and experiences

Special Requirements of the Program

For Admission...

The following admission requirements, which apply to both the Master of Science in Early Childhood Education program and to the master's program with an Early Childhood Education Certification, must be met in addition to the general admission requirements for the School of Graduate Studies. Undergraduate work need not be in a specific field of study.

- An interview and a review of academic credentials are required. Applicants who lack an undergraduate Q.P.A. of 2.5 will be admitted on a provisional basis. A 3.0 Q.P.A. is required of all persons seeking admission to candidacy.
- All applicants will take the Miller Analogies Test. A minimum score of 30 is required.

Certification Requirements

• Three recommendations from any of the following persons: undergraduate or graduate faculty, direct-line supervisors, administrators, and other individuals who are familiar with the applicant's academic abilities and personal qualities. Recommendation forms are available from the program coordinator for early childhood education.

• Written completion of a 10-day field experience. Forms are available from the program coordinator.

• Passing and/or remediation of speech and hearing tests, and vision tests. Forms are available from the program coordinator.

• Passing the National Teacher Examination core battery and the specialty area of early childhood education.

For Retention...

• Students must maintain a Q.P.A. of 3.0 throughout their program. Courses in which a grade of C or lower are obtained must be repeated with a grade of B or higher. Students not maintaining a Q.P.A. of 3.0 after candidacy will be removed from the candidacy list.

• Students must apply for candidacy.

• State Police checks required by the Department of Health and Welfare and the Bureau of Certification must be completed prior to practice teaching in private and public schools, Head Start programs, and day care centers in Pennsylvania.

• All students will take and pass a screening examination (a candidacy exam) which is administered when they have completed 9 to 12 semester hours of graduate work. The examination consists of written and oral requirements.

For Graduation...

The Master of Science in Early Childhood program consists of 30 semester hours; 6 additional semester hours in practicum are required for the Level I Certification, N, K-3. Students must complete 6 semester hours in foundation courses, 18 to 30 semester hours in early childhood education core courses, and 6 semester hours in related studies courses.

Required Courses

62.410	Workshop in Preschool Education
62.522	Curriculum Trends in Early Childhood Education
62.523	Practices in Teaching the Young Child
62.590	Current Research and Development in Early Childhood Education
62.591	Learning and Development of the Young Child
62.592	Identification and Prescription of the Needs of Young Children
62.593	Organization and Administration of Educational Programs for Young Children
62.594	Practicum in Early Childhood Education

• Students seeking a Master of Science in Early Childhood Education must complete 30 semester hours with a 3.0 Q.P.A. Students seeking a Master of Science in Early Childhood Education with N, K-3 certification must complete 42 semester hours with a Q.P.A. of 3.0.

• A departmental paper, thesis, comprehensive project, or the comprehensive examination is required for completion of the degree program. Specific guidelines are available from the program coordinator. All papers must be written following the American Psychological Association (APA) style guide. A five chapter format is preferred.

• All program requirements must be completed within six years after admission into the program. Students are required to complete their programs within four years after candidacy is granted. Extensions may be granted in certain situations. Students, who fail to enroll and complete a course within a two-year period, are placed in an inactive file. Inactive students must reapply for admission, retake the screening examination, and reapply for candidacy. Courses older than six years will not meet the degree requirements.

• Students must apply for candidacy.

MASTER OF SCIENCE in Education of the Hearing Impaired

Program Coordinator: Samuel B. Slike, D.Ed.
(717) 389-4436

Program Description

The graduate program in education of the hearing impaired (deaf and hard of hearing) is offered through the Department of Communication Disorders and Special Education. Prospective classroom teachers or itinerant hearing therapists are provided a variety of courses to prepare them for working with hearing impaired individuals. Coursework furnishes conceptual as well as experiential background in the areas of academic therapy, speech-language therapy, communication, psycho-social development, curriculum and instruction. Depending on their undergraduate major, students are prepared to work with preschool, elementary, secondary, or multiple handicapped hearing impaired individuals.

In their practicum courses, students are provided the opportunity to work with hearing impaired individuals in one-to-one group situations. Various sites throughout Pennsylvania are offered for practicum experience. These sites are chosen according to the needs of the student intern. This practicum provides a classroom as well as an itinerant experience with the hearing impaired.

The Education of the Hearing Impaired program does not advocate any particular method of working with hearing impaired students. Hearing impaired persons are viewed as individuals with varying needs. Prospective classroom teachers are afforded a background in all methods of instruction so as to prepare them to work with the hearing impaired in a variety of educational settings.

Faculty Research Interests

Samuel B. Slike, D.Ed., associate professor.
Teaching sign language through videodisc technology

Gerald W. Powers, Ed.D., professor.
Admission procedures and criteria for graduate training programs

Judith M. Hirshfeld, M.A., assistant professor.
Developing oral communication skills in hearing impaired children and counseling the hearing impaired and their families

Special Requirements of the Program

For Admission...

Applicants with bachelor's degrees in early childhood education, elementary education, secondary education, special education, and communication disorders, are

considered to have appropriate educational backgrounds for entry into the program. Prerequisite coursework in the following areas must be completed either before or during the graduate program.

- Undergraduate area of concentration in education of the hearing impaired

Required Courses

72.152	Introduction to Communication Disorders
74.201	History, Education, and Guidance of the Hearing Impaired
74.205	Introduction to Instructional Methods with the Hearing Impaired
72.200	Introduction to Audiology
74.251	Phonetics
72.300	Auditory Training and Speech-reading

Students who anticipate applying for admission to the graduate program in education of the hearing impaired are strongly urged to elect the following courses:

Electives

74.153	Introduction to Sign Language
74.154	American Sign Language I
74.155	American Sign Language II
74.254	The Deaf Culture
74.255	American Sign Language III
74.256	American Sign Language IV
74.469	Experience with the Hearing Impaired

All applicants to the graduate program in education of the hearing impaired must have completed an introductory course in statistics or its equivalent.

• A bachelor's degree with a Q.P.A. of 2.8 in the education of the hearing impaired area of concentration. An overall Q.P.A. of 2.8. If either Q.P.A. is below 2.8, the student will be admitted on a provisional basis and must earn a Q.P.A. of 3.0 or better upon completion of 9 to 12 semester hours in graduate-level courses. No C's may be earned during the provisional period.

• A one-page, handwritten letter, stating professional background, experience, and rationale for wanting to be admitted to this master's program.

• Three letters of reference from individuals who have knowledge of the applicant's academic and teaching background. For confirmation purposes, the letters must contain the name, address, position, and telephone number of the writer.

• Applicants must make arrangements with the program coordinator for an interview.

• The National Teacher Examination (N.T.E.) and/or the Graduate Record Examination (G.R.E.) will be required of all applicants.

There is one entry point for full-time enrollment in this graduate program—summer semester. The application

Faculty Research Interests

Harold J. Bailey, Ph.D., professor.

Instructional design, computer-based instruction, interactive technologies, diagnostic/prescriptive mathematics

William D. Milheim, Ph.D., assistant professor.
Instructional design, interactive technologies, educational psychology, artificial intelligence

Special Requirements of the Program

For Admission...

- A personal interview
- Three letters of recommendation
- A one- to two-page paper describing the applicant's interest in instructional technology

For Retention and Candidacy...

Requirements of this program are the same as those for the School of Graduate Studies.

For Graduation...

Persons who hold a bachelor's degree in any discipline from an accredited college or university may become degree candidates and proceed to the master's degree by completing a minimum of 30 semester hours. Either an internship or a master's thesis is required. All courses are 3 semester hours unless otherwise indicated.

Required Courses (15 semester hours)

or	09.580 Special Topics: Instructional Design I
or	60.584 Curriculum and Instructional Theory, Design, and Development
or	25.585-7 Special Topics: Public Address Seminar
or	09.584 Communication Technology
	27.511 TV Production and Design
	53.580 Programming for Interactive Video
	93.583 Human Resource Development
or	48.453 Organizational Psychology
or	93.566 Organizational Behavior

Elective Courses (12 semester hours)

09.582 Special Topics: Author Systems I
09.583 Special Topics: Instructional Design II
09.585 Special Topics: Author Systems II
53.541 Statistical Applications
53.575 Computer Programming for Instructional Applications
53.576 Computer Graphics for Instructional Applications
53.577 Pascal for Instructional Applications
53.578 Design for Instructional Systems Using Pascal
53.592 Special Topics: Artificial Intelligence
60.578 Group Process in Supervision
60.579 Supervision of Instruction
60.585 Curriculum and Instructional Evaluation

Required Final Course (3 to 6 semester hours)

Select one of the following two courses:

09.590	Graduate Internships
09.599	Master's Thesis

MASTER OF SCIENCE in Nursing

Program Coordinator: M. Christine Alichnie, Ph.D.
(717) 389-4600

Program Description

Bloomsburg University offers a Master of Science in Nursing (M.S.N.) with specialty areas in psychiatric/mental health, community health, and adult health and illness. The programs of study prepare graduates as clinical specialists in advanced practice of professional nursing and provide the foundation for education at the doctoral level. A minimum of 39 semester hours is required in each of these three specialty areas for graduation. The master's degree program is accredited by the National League for Nursing.

Psychiatric/Mental Health Nursing

This option is designed to prepare graduates for the multifaceted roles of clinical nurse specialists in the advanced practice of psychiatric/mental health nursing. Analytical thinking, creative problem-solving, and responsible decision-making are employed with increased expertise and accountability as graduates work independently and interdependently with clients and health care providers to improve the quality of mental health care delivery. M.S.N. graduates are prepared to assume leadership roles using advanced knowledge and skills in their specialty area as well as relevant nursing research in the promotion and maintenance of mental health and the treatment of mental illness in a variety of primary, secondary, and tertiary settings. The ability to actively participate in social, political, and ethical action designed to impact health policy and improve the quality of psychiatric/mental health nursing practice are critical attributes of the graduates of the program.

Community Health Nursing

This option is designed to prepare graduates as clinical nurse specialists in community health nursing. The primary focus of the program is on a specialized experience in working with health-related issues and problems common to rural populations and specific at risk populations to maximize their optimal wellness and health care resources. Graduates assume leadership roles as clinical nurse specialists, utilizing the nursing process with increased expertise and accountability in promoting and improving community health care.

Adult Health and Illness Nursing

This option is designed to prepare graduates to assume leadership positions as clinical nurse specialists in the area

of adult health and illness. Students engage in analytical thinking, innovative problem-solving, and responsible decision-making in the promotion, maintenance, and restoration of the optimal health of holistic humankind in various settings and clinical foci. Advanced knowledge, understanding, and skills for the role development of a clinical nurse specialist within an area of adult health and illness are integrated within the courses. As advanced practitioners, graduate students function independently and collaboratively with clients and the interdisciplinary health team to improve and provide quality health care for a specific adult population. Social, ethical, and political actions are emphasized in order to initiate and effect change regarding the development of health care policy and its effect on health care delivery.

Philosophy

Graduate education in nursing at Bloomsburg University emanates from the philosophy, mission, and goals of the undergraduate program and parent institution. Graduate students engage in analytical thinking, innovative problem-solving, and responsible decision-making in the promotion, maintenance, and restoration of the optimal health of holistic humankind (individual-family-community) in a variety of health care settings thus assuming leadership positions as a clinical nurse specialist.

Graduate education in nursing is based on the belief that consideration of individual differences and flexibility in program planning is essential to facilitate the development of the optimal potential of each student. Graduate students in the program are responsible for the formulation, implementation, and evaluation of personal and professional goals which support a belief in and commitment to leadership in selected areas of advanced nursing practice.

The faculty serve as role models, resource persons, and facilitators of learning. They are responsible for providing knowledge, stimulating analytical thinking, and facilitating innovativeness and flexibility in creative problem-solving and responsible decision-making for advanced nursing practice.

Purpose and Terminal Objectives

Graduates of this program:

- acquire advanced knowledge of theories of nursing and related disciplines in improving the practice of professional nursing in selected specialty areas.

- utilize advanced knowledge and skills in selected specialty areas of professional nursing practice in the promotion, maintenance, and restoration of the optimal health of clients in a variety of health care settings.

- validate, utilize, and extend research to improve the quality of professional nursing practice.

- assume leadership positions as clinical nurse specialists in the practice of professional nursing.

- participate in social and political action designed to

improve the quality of nursing practice, health policy, and health care delivery.

- function independently and interdependently with clients and the interdisciplinary health team in improving the quality of health care delivery in selected areas of advanced nursing practice.

- evaluate personal and professional goals that support a belief in and commitment to leadership in selected areas of advanced nursing practice.

- accept responsibility for personal and professional growth through the mechanism of lifelong learning.

Part-time or Full-time Study

Students may select either full-time or part-time study depending upon their individual needs. Classes are scheduled in late afternoon and evening in order to facilitate progression in either type of study. Professional Nurse Traineeship Grants from the U.S. Department of Health and Human Services are available for both types of study on a competitive basis. Graduate assistantships are also available to students in the program.

Preceptors

In the clinical courses in each specialty area, students have the opportunity to work with a preceptor who is a master's prepared clinical nurse specialist in the area of the student's specialization. The student works with the faculty adviser to select the preceptors based upon the program and the individual student's goals.

Clinical Placements

Students are placed in major medical centers in Pennsylvania as well as with the National Institutes of Health (NIH); outpatient and inpatient psychiatric/mental health agencies in Pennsylvania; and community agencies in a variety of settings where holistic health care is delivered such as hospice care and other specialized health practices. The selection is made jointly by the faculty adviser and the individual student.

Research Opportunities

Students have the opportunity to work collectively with faculty and preceptors in research endeavors. They also validate, utilize, and extend research in all coursework and through the thesis which is required for graduation.

Faculty Research Interests

M. Christine Alichne, R.N., Ph.D., associate professor. Professional socialization of baccalaureate nursing students, relationship between interpersonal and personal values, cognitive and noncognitive predictors of success in baccalaureate nursing, and cardiopulmonary clinical nursing research topics

Mary A. Gavaghan, R.N., Ed.D., associate professor. Casual attributions, coping, and needs of cancer patients,

practices of breast self-examination and psychosocial factors as possible determinants of breast cancer; and other cancer nursing topics

Sandra G. Girton, R.N., M.S.N., assistant professor.
Cancer care nursing and faculty clinical practice models for nursing faculty

Nancy A. Onuschak, R.N., Ed.D., professor.
Staff nurses perception of factors affecting quality of therapeutic nursing care, cost-benefit analysis of clinical education in B.S.N. students, and psychiatric/mental health nursing research topics.

Lauretta Pierce, R.N., Ph.D., professor.
Feeding patterns in infants, perceptions of parents with children on ventilator support, and pathophysiological and clinical topics in Nursing of Children

Patricia A. Torsella, R.N., M.S.N., assistant professor.
Mentoring, analysis of the concept for nursing education, basic proficiency in medication administration, and community health clinical nursing research topics

Dorette Welk, R.N., M.S.N., associate professor.
Attitudes in postmyocardial infarction patients regarding transfer setting, model development relative to educator knowledge and use of pattern recognition procedure in baccalaureate nursing programs, and general adult health and illness nursing research topics

Special Requirements of the Program

For Admission...

In addition to meeting the general admission requirements for the School of Graduate Studies, applicants must:

- document a bachelor's degree with a major in nursing from a program accredited by the National League for Nursing (NLN), an undergraduate Q.P.A. of 3.0, and successful completion of undergraduate courses in statistics, research, and health assessment (as either integrated content or as a separate course);
- be licensed to practice nursing in the United States;
- have received a minimal composite score of 1200 on the Graduate Record Examination (G.R.E.);
- submit three letters of professional recommendation;
- submit a narrative detailing personal and professional goals for graduate education;
- have completed a minimum of one year postbaccalaureate clinical practice in the applicant's chosen area of clinical specialty prior to admission for candidacy.

Following a preliminary review of admission materials, qualified students are invited for personal interviews with members of the faculty. Applicants who do not meet the identified admission requirements will be considered on an

individual basis. Applicants may request a preliminary interview with the program coordinator for clarification. These applicants may be admitted on a provisional basis until such time as identified prerequisites are completed to ensure knowledge and skills equivalent to a sound baccalaureate nursing base.

For Retention...

In addition to meeting the general retention requirements for the School of Graduate Studies, students in the M.S.N. program who have been admitted to candidacy must maintain a minimal Q.P.A. of 3.0, receive a minimum grade of B in advanced clinical courses, and complete the program within six calendar years. Failure to meet these requirements will result in the student being transferred to non-degree status (Category 510).

For Candidacy...

Requirements for candidacy are the same as those for the School of Graduate Studies. Requests for admission to candidacy are submitted to the option adviser and subsequently are reviewed and recommended by the Nursing Graduate Council for approval by the Assistant Vice President for Graduate Studies and Research.

For Graduation...

Required Courses (12 to 15 semester hours)

- 82.501 Research
- 82.502 Conceptual Role Models
- 82.503 Role Theory and Development in Nursing Practice
- 82.590 Thesis

Clinical Specialization Courses (12 semester hours)

- 82.510 Psychiatric/Mental Health Nursing I
- 82.511 Community Health Nursing I
- 82.512 Adult Health and Illness Nursing I
- 82.530 Psychiatric/Mental Health Nursing II
- 82.531 Community Health Nursing II
- 82.532 Adult Health and Illness Nursing II

Elective Courses (12 semester hours)

Graduate-level courses to fulfill elective requirements will be chosen by the student and an adviser based on career needs, clinical option requirements, and role development of a clinical nurse specialist. Electives may be selected from graduate courses in psychology, sociology, political science, business, communication disorders, speech communication, education, and nursing. The following courses are considered nursing electives:

- 82.504 Physical Assessment
- 82.505 Advanced Pathophysiology
- 82.506 Epidemiology: Concepts and Principles for Contemporary Nursing Practice
- 82.513 Management and Organizational Behavior in Advanced Nursing Practice
- 82.533 Management and Organizational Behavior in Health Care Delivery System

Projection of Part-time Course Sequence

First Year

Fall	82.502	3 semester hours
Spring	82.501	3 semester hours
Summer	82.503	3 semester hours

Second Year

Fall	Elective	3 semester hours
Spring	Elective	3 semester hours
Summer	Elective	6 semester hours

Third Year

Fall	82.510 or 82.511 or 82.512 6 semester hours
Spring	82.530 or 82.531 or 82.532 6 semester hours
Summer	82.590 6 semester hours

Projection of a full-time sequence of courses is possible over a two-year calendar.

Thesis

Graduate students who have been admitted to candidacy for the M.S.N. program are required to complete a satisfactory thesis. Immediately after admission to candidacy, it is the responsibility of the student to confer with the graduate adviser assigned by the program coordinator to choose a potential thesis adviser from the Nursing Department's approved list of faculty. The thesis adviser serves as chairperson of the thesis committee. A second member may be selected from full-time nursing faculty. One of the nursing members should be in the student's area of clinical interest. The third member of the committee must be a graduate faculty member of Bloomsburg University and may be selected from any discipline within the university. The thesis must address a clinical nursing topic. Students present their completed thesis to peers, faculty, and the university. Defense of their thesis is the culminating event in the student's program of study and the clinical nursing research topic.

Clinical Policies

Prior to enrolling in advanced clinical courses, graduate students must be candidates for the degree. As set forth in the contractual agreements with agencies serving as clinical practicum sites, all graduate students must have the following documentation on file with the Department of Nursing prior to participating in the clinical component:

- verification of current cardiopulmonary resuscitation certification;
- verification of current professional liability insurance for a minimum of \$300,000;
- a comprehensive health examination;
- verification of current Pennsylvania R.N. licensure;
- current resume'.

Clinical Sites and Preceptors

The Allentown Hospital-Lehigh Valley Hospital Center
The Lehigh Valley Hospital Center Campus and
The Allentown Hospital Campus, Allentown, Pa.
Preceptors:

Cynthia Runner-Heidt, M.S.N., R.N.
Sandra Smith, M.S.N., R.N.

Berwick Hospital Center Home Health Care Services,
Berwick, Pa.

Preceptor:
Marilyn Gibbons, M.S.N., R.N.

Carlisle Hospital, Carlisle, Pa.

Preceptor:
Susan Walsh, M.S.N., R.N.

Columbia-Montour Home Health/Visiting Nurse Assoc.

Preceptor:
Jane Gittler, M.S.N., R.N.

Danville State Hospital, Danville, Pa.

Hahnemann University, Philadelphia, Pa.

Private practice associated with Lycoming OB and GYN
Associates, Nurse-Midwifery Service, Williamsport, Pa.

Preceptor:
Rosalie F. Kaleda, M.S.N., R.N., C.N.P.

Maternal and Family Health Services, Inc., Wilkes-Barre, Pa.

Preceptor:
Cheryl Fuller, M.S.N., R.N., C.N.P.

Meadows Psychiatric Center, Centre Hall, Pa.

Mercy Hospital, Wilkes-Barre, Pa.
Preceptors:

Ellen Dennis, M.S.N., R.N.
Viola Gommer, M.S.N., R.N.

The Milton S. Hershey Medical Center of The Pennsylvania State University, Hershey, Pa.

Preceptors:
Jennifer Cunningham, M.S., R.N., C.C.R.N., CEN
Patricia Long, M.S.N., R.N.
Mary Kathryn Reeves-Hoche, M.A., M.S., R.N.
Wendy Wilkinson, M.S.N., R.N.

National Institutes of Health, Department of Health and
Human Services, Bethesda, Md.

Preceptor:
Morag Dahlstrom, M.S.N., R.N.

Polyclinic Medical Center, Harrisburg, Pa.

Preceptors:
Trish Bennett, M.S.N., R.N.
Rita Brinkman, M.S.N., R.N.
Sandra Christensen, M.S.N., R.N.
Joanne Ferrari, M.S.N., R.N.
Linda Haldeman, M.S.N., R.N.
Susan Hamilton, M.S.N., R.N.

Ann Meyers, M.S.N., R.N.
Terri Williams, M.S.N., R.N.

Presbyterian Medical Center, Philadelphia, Pa.

Preceptors:

Barbara Gleeson, M.S.N., R.N.
Sandra Hicks, M.S.N., R.N.
Mary Ellen Kern, M.S.N., R.N.

SUN Home Health, Inc.,

Preceptor:

Christine Madonia, M.S.N., R.N.

Veterans Administration Medical Center, Wilkes-Barre, Pa.

Preceptor:

Louise Guszick, M.S., R.N., C.R.N.P.

Williamsport Hospital and Medical Center, Williamsport, Pa.

Preceptor:

Kristine McGee, M.S.N., R.N.

MASTER OF SCIENCE in Special Education

Program Coordinator: Andrew J. Karpinski, Ed.D.
(717) 389-4119

Program Description

This program provides an opportunity for individuals to receive a Master of Science in Special Education. The program is intended to improve the competence of the student's work with exceptional individuals, to develop potential for leadership, and to prepare students for further graduate study in the field of special education. The applicant may choose an area of study in mental retardation, learning disabilities, behavior disorders, or gifted/talented.

An area of specialization in exceptional persons is also offered. The program is designed for professionals who are not in special education, but who wish to expand their knowledge and develop new skills for working with the exceptional person.

Faculty Research Interests

Mary B. Hill, Ph.D., professor.
Special education research and technology

Kenneth P. Hunt, Ph.D., professor.
Behavior disorders

Andrew J. Karpinski, Ed.D., professor.
Administration and supervision, gifted/talented

Ann L. Lee, Ed.D., assistant professor.
Mainstreaming, early childhood, mildly handicapped

Colleen J. Marks, Ed.D., professor.
Learning disabilities, communication disorders

John M. McLaughlin, D.Ed., professor.
Mental retardation, severely/profoundly handicapped, gifted

Carroll J. Redfern, Ed.D., professor.
Exceptionalities, mental retardation, supervision

James T. Reifer, M.Ed., associate professor.
Exceptionalities, mildly handicapped, vocational education

Joseph M. Youshock, Ed.D., associate professor.
Exceptionalities, vocational education, transition

Special Requirements of the Program

For Admission...

Applicants seeking admission to this master's degree program in special education must satisfy the general admission requirements for the School of Graduate Studies. The following additional criteria are also required:

- A one-page, handwritten letter of intent stating professional background, experience, and rationale for wanting to be admitted to a specific department;
- The names, addresses, positions, and telephone numbers of three individuals who have knowledge of the applicant's academic and/or teaching background and will provide a professional reference;
- An interview with the program coordinator;
- Graduate Record Examination; and
- An undergraduate cumulative Q.P.A. of 2.8 with a Q.P.A. of 3.0 in the major or in the last 60 undergraduate semester hours. If scores are below either of the above, the student will be admitted as provisional, which must be eliminated after completion of 9 to 12 semester hours in which a Q.P.A. of 3.0 or better is earned. No C's may be earned during a probationary period.

For Retention...

A Q.P.A. of 3.0 is required for retention in the program. A of maximum of two Cs is permissible. If a C is earned in a practicum course, it must be repeated with a grade of B or better within a time frame determined by the area of concentration.

For Graduation...

Students seeking the M.S. in Special Education must complete a minimum of 30 semester hours with a cumulative Q.P.A. of 3.0. Students may opt to complete a thesis or a departmental paper, or take 6 additional semester hours—yielding a total of 36 semester hours—in place of the thesis or departmental paper.

A comprehensive examination will be held during the semester the student intends to graduate. Evaluation will be on a pass/fail basis. If a graduate student fails this exam, he/she may repeat it.

Behavior Disorders

Required Courses

- 79.591 Research in Education
- or 70.565 Reading and Interpreting Research in Special Education
- 70.570 Foundations of Behavior Disorders
- 70.571 Interventions with Behavior Disordered Individuals
- 70.572 Seminar on Behavior Disorders

Elective Courses

Students must select 9 semester hours from special education courses and 9 to 15 semester hours from general elective courses.

Gifted/Talented

Required Courses

- 79.591 Research in Education
- or 70.565 Reading and Interpreting Research in Special Education
- 70.517 Education of the Gifted Child
- 70.518 Identification and Evaluation in Gifted/Talented Education
- 62.534 Creativity for Teachers
- 70.519 Curriculum and Program Development in Gifted/Talented Education
- 70.552 Special Project
- 70.592 Practicum in Gifted/Talented Education

Elective Courses (9 to 15 semester hours)

Learning Disabilities

Required Courses (21 semester hours)

- 79.591 Research in Education
- or 70.565 Reading and Interpreting Research in Special Education
- 70.544 Diagnostic and Remedial Techniques
- 70.560 Neurologically Impaired Individuals
- 70.505 Seminar in Learning Disabilities
- 70.590 Diagnostic and Remedial Practicum Learning Disabilities
- 70.532 Communication Disorders of Exceptional Individuals
- 70.554 Disorders of Written Communication
- or An appropriate reading course

Elective Courses (9 to 15 semester hours)

Mental Retardation

Required Courses (18 semester hours)

- 79.591 Research in Education
- or 70.565 Reading and Interpreting Research in Special Education
- 70.544 Diagnostic and Remedial Techniques
- 70.502 Mental Retardation
- 70.520 Curriculum and Materials for the Mentally Retarded/Physically Handicapped
- 70.526 Vocational Work Study Programs

- 70.591 Practicum in Mental Retardation/Physical Handicapped

Elective Courses (9 to 15 semester hours)

Exceptional Persons (21 semester hours)

- 70.516 Psychology of Exceptional Individuals
- 70.591 Research in Education
- or 70.565 Reading and Interpreting Research in Special Education

A minimum of 15 semester hours from the following:

- 70.455 Learning Disabilities
- 70.490 Special Workshop
- 70.501 Administration and Supervision in Education of Exceptional Individuals
- 70.502 Mental Retardation
- 70.517 Education of the Gifted Individual
- 70.526 Vocational Work Study Programs
- 70.532 Communication Disorders of Exceptional Individuals
- 70.544 Diagnostic and Remedial Techniques
- 70.552 Special Projects
- 70.559 Seminar in Education of Exceptional Individuals
- 70.560 Neurologically Impaired Individuals
- 70.562 Problems of Individuals with Impaired Motor Development
- 70.570 Foundations of Behavior Disorders
- 72.530 Fundamentals of Graduate Audiology
- 72.572 Augmentative Communication for Nonspeaking Individuals
- 74.490 Counseling Needs of Communication Disordered Individuals and Families
- 74.501 Introduction to Sign Language

Elective Courses (9 to 15 semester hours)



MASTER OF SCIENCE in Speech Pathology

Program Coordinator: Ronald R. Champoux, Ph.D.
(717) 389-4446

Program Description

The graduate program in speech pathology prepares students for clinical practice with a variety of communication disorders and in a variety of clinical settings. The program is heavily oriented in clinical experiences in our in-house clinic culminating with a full semester of an externship in a clinic, hospital, or school setting.

Faculty Research Interests

Dianne H. Angelo, Ph.D., assistant professor.
Clinic, clinical methods, augmentative communication

Ronald R. Champoux, Ph.D., associate professor.
Neurogenic disorders of speech and language, orofacial disorders of speech

Robert J. Kruse, Ph.D., professor.
Voice, stuttering, research, graduate practicum

Robert J. Lowe, Ph.D., assistant professor.
Phonology, phonetics, speech science

Julia M. Weitz, M.S., assistant professor.
Normal language, language disorders in children

Special Requirements for the Program

For Admission...

In addition to meeting the general admission requirements for the School of Graduate Studies, applicants for the master's degree program in speech pathology must meet the following specifications:

- Applicants are required to submit a one-page, typed letter detailing their professional background, experience, and rationale for wanting to be admitted to the program in speech pathology.

- Applicants are required to submit three letters of recommendation from references who have knowledge of their academic and clinical background. This information must include the name, address, position, and telephone number of each reference.

- Applicants must have a bachelor's degree from an accredited institution with a major in communication disorders and a Q.P.A. of 2.8. Applicants whose major is in an area other than communication disorders will be required to satisfactorily complete certain academic and practicum deficiencies. These will be prescribed by faculty following analysis of the individual's transcript.

- A minimum combined score of 1450 on the Graduate Record Examination is required of all applicants.

Each applicant's overall Q.P.A. and G.R.E. scores will be multiplied and the resultant score ranked from highest to lowest with the best applicants taken from the pool to fill the quota for speech pathology.

For Retention...

Graduate students must maintain a Q.P.A. of 3.0 with a maximum of two C's throughout the graduate program. If a grade of C is earned in a clinic course, the course must be repeated. To progress in graduate school, students must make application for admission to candidacy after they have completed 9 semester hours of coursework.

For Graduation...

The graduate program in speech pathology consists of a minimum of 48 semester hours with most courses being required. A comprehensive examination is scheduled during the semester the student plans to graduate. Evaluation is on a pass/fail basis. If a student fails, she/he may retake the examination. The American Speech-Language-Hearing Association examination for clinical competence may be substituted for the comprehensive examination providing the graduate student receives a minimal score of 650. The clinic is necessary and inseparable from the existing course sequence. It becomes an important step in the development of a competent clinician, linking the classroom and textbook with clinical experience, certification, and employment in the field.

Required Courses

- 72.550 Adult Aphasia
- 72.552 Preschool Language Disorders
- 72.554 Stuttering
- 72.556 Phonology
- 72.558 Clinical Practicum
- 72.560 Voice Disorders
- 72.562 Language Disorders of School Children
- 72.564 Orofacial Disorders of Speech
- 72.566 Clinical Practicum
- 72.530 Fundamentals of Audiology
- 72.576 Clinical Practicum
- 72.578 Neuromuscular Disorders of Speech
- 72.580 Communication Disorders of the Traumatically Injured
- 72.582 Research in Speech Pathology
- 72.584-.586 Field Experience

Elective Courses

- 72.568 Speech Habilitation in Schools
- 72.570 Adult II - Language Disorders
- 72.572 Augmentation Communication
- 72.574 Seminar in Communication Disorders

SUPERVISORY CERTIFICATE PROGRAMS

Program Coordinator: John R. Hranitz, Ed.D.
(717) 389-4030

Specialization for Supervisor of Curriculum and Instruction (N-12) Certificate Program

The Supervisor of Curriculum and Instruction Certificate Program is designed for individuals seeking certification with district-wide responsibilities and includes designing, coordinating, improving, evaluating, and extending instruction from N to 12.

Prerequisites for Admission

- Candidates must provide proof of a Pennsylvania teaching certificate.
- Candidates must provide evidence of at least five years of teaching experience. (Experience on an emergency certificate or an interim certificate is not acceptable.)

Program Requirements

Candidates must complete a minimum of 30 semester hours at the graduate level from seven areas of competency.

- Curriculum and instruction—theory, design, and development
- Curriculum and early childhood, elementary, middle, and secondary education
- Research
- Supervision, management, and administration
- Group dynamics
- School law and finance
- Practicum—field experience

Specialization for Subject Area Supervisory (K-12) Certificate Program

This program is designed for the person with primary responsibility supervising and directing the activities of professional and non-professional employees in given fields.

Areas of Specialization

Curriculum and Instruction	36 semester hours
Early Childhood Education	24 semester hours
Elementary Education	24 semester hours
Reading	30 semester hours
School Health Service	24 semester hours

Secondary Education	24 semester hours
Communication	
Foreign Languages	
Mathematics	
Science	
Social Studies	
Special Education	24 semester hours

Prerequisites for Admission

- Concentration in the area for which certification is sought.

- At least five years of experience in the field for which certification is sought. (Valid certificate in the field)

Program Requirements

A minimum of 21 semester hours of graduate-level courses from the following areas:

Management and administration
Principles and practices in school supervision
School law and finance
Group dynamics
Research techniques
Curriculum development
Practicum—field experience



INTERDISCIPLINARY STUDIES

Interdisciplinary courses are planned by more than one department or program. The courses are sometimes taught by teams of faculty members. Students should consult with their advisers to determine the appropriateness of these courses for their particular degree programs.

COOPERATIVE DOCTORAL PROGRAM

Bloomsburg offers a Doctorate of Education in cooperation with Indiana University of Pennsylvania (IUP). This is a cooperative doctoral program in elementary education that combines the resources of both institutions.

The program includes areas of concentration in:

- curriculum and supervision;
- administration;
- reading;
- early childhood education;
- educational psychology; and
- special education.

Students take courses at both Bloomsburg and IUP, and the doctoral committee guiding the dissertation consists of faculty from both institutions.

If you are interested in this doctoral degree program, you should contact William O'Bruba or John Hranitz at Bloomsburg University, Bloomsburg, PA 17815.



COURSE DESCRIPTIONS

Course Codes

Code	Field of Study
91.	Accounting
46.	Anthropology
30.	Art
31.	Art History
32.	Art Studio
72.	Audiology/Speech Pathology
50.	Biology
90.	Business Education
23.	Communication
74.	Communication Disorders
25.	Communication Studies
40.	Economics
60.	Educational Foundations
62.	Elementary and Early Childhood Education
96.	Finance
42.	History
92.	Information Processing
09.	Interdisciplinary Courses
93.	Management
55.	Marine Science
97.	Marketing
27.	Mass Communications
53.	Mathematics and Computer Science
82.	Nursing
94.	Office Systems
54.	Physics
44.	Political Science
79.	Professional Studies
48.	Psychology
63.	Reading
65.	Secondary Education
45.	Sociology
70.	Special Education



ACCOUNTING (Code 91)

91.501 FINANCIAL ACCOUNTING

3 semester hours

Emphasis on asset valuation, income determination, and financial accounting principles, with selected topics from the funds statement and analysis and interpretation of financial statements.

91.502 ADVANCED FINANCIAL ACCOUNTING

3 semester hours

Advanced problems in consolidated statements, stockbroker's equity, partnerships, fiduciary accounting, and selected topics dealing with government units and nonprofit service organizations. Selected reference to professional literature and uniform CPA examination problems.

Prerequisite: 91.501

91.503 GOVERNMENTAL FUND ACCOUNTING

3 semester hours

Accounting principles and practices of governments and nonprofit institutions. Comparisons between accounting principles and practices which apply to governments and nonprofit institutions and those which are generally accepted in business.

91.524 MANAGERIAL ACCOUNTING

3 semester hours

Introduction to the literature of accounting in management decision making. Theory, problem solving, case studies.

ANTHROPOLOGY (Code 46)

46.440 LANGUAGE AND CULTURE

3 semester hours

A study of the place of oral or non-oral language in human evolution and contemporary cultures. Topics discussed include dialectal variation, discourse analysis, multilingualism, language, and cognition and the role of language in education.

46.450 PEOPLES AND CULTURES OF SOUTH AMERICA

3 semester hours

A survey introduction to the aboriginal, non-literate cultures of South America including the ecological background, archaeology, and cultural patterns.

46.470 HISTORY OF ANTHROPOLOGICAL THOUGHT AND THEORY

3 semester hours

Intensive survey of the leading methods and theories of anthropological and ethnological interpretation with special emphasis on the concept of culture and its practical application to modern problems.

ART (Code 30)

30.590 CURRENT THEORIES OF ART AND ART EDUCATION

3 semester hours

The course focuses on current theories of art and art education practiced in American schools with an emphasis on eventual application. A research paper or research project is required.

30.591 ADVANCED VISUAL ARTS FOR EXCEPTIONAL CHILDREN

3 semester hours

The importance of art activity as a means of enriching and stimulating special children's awareness of themselves and their world is stressed. Emphasis is placed on those positive aspects for creative activity which the handicapped child possesses.

30.595 MASTER'S THESIS

3-6 semester hours

ART HISTORY (Code 31)

31.560 READINGS AND RESEARCH IN CONTEMPORARY ART HISTORY

3 semester hours

A detailed study of contemporary movements in art from the late 19th century to the present with readings and research for advanced students.

31.565 READINGS AND RESEARCH IN AMERICAN ART HISTORY

3 semester hours

Advanced study of the history of visual art in America.

31.570 READINGS AND RESEARCH IN EARLY EUROPEAN ART HISTORY

3 semester hours

The research focus for this course is on specific topics relating to the periods from Pre-Historic to Gothic.

31.571 READINGS AND RESEARCH IN LATER EUROPEAN ART HISTORY

3 semester hours

The period from the early Renaissance through French Impressionism provides the thrust for this course.

31.575 READINGS AND RESEARCH IN ORIENTAL ART HISTORY

3 semester hours

An advanced survey of Oriental Art in the broadest sense of the work the art and architecture of the ancient Near East, Japan, China, and India. An introduction to both monuments and cultural ideas, it exposes the advanced student to basic problems in chronology, style, and research methodology.

31.580 READINGS AND RESEARCH IN ARCHITECTURAL ART HISTORY

3 semester hours

An advanced survey of the evolution of architecture in the Western World from the Pharaonic Egyptian period through the contemporary 20th century. Typical and outstanding examples of each period studies are discussed and researched by the general student. Imperative to an understanding of the physical structures studied is an analysis of the type of society and the rationale for the creation of such an architecture.

31.585 ART AND CULTURE OF FRANCE

3 semester hours

A study-tour of France with specific attention to French Art seen in relation to its social and cultural environment. Visits will be made to places of artistic and cultural interest in and around Paris and specific areas of France where the emphasis is for the particu-

lar course of study. The course is also offered through the School of Extended Programs for advanced students and members of the community.

31.592 READINGS AND RESEARCH IN ADVANCED VISUAL AESTHETICS

3 semester hours

Advanced study of images and viable aesthetic positions in the plastic arts emphasizing artistic and perceptual awareness and concern with environmental relationships.

31.595 DIRECTED STUDY IN ART HISTORY

3 or 6 semester hours

Advanced study of a topic in the area of art history. Following an intensive review of the scholarly literature in the field, a paper that meets contemporary standards of publication in the field will be required under the direction of a faculty adviser.

ART STUDIO (Code 32)

32.500 ADVANCED CERAMICS I

3 semester hours

Students define in writing their level of knowledge and competency, then prepare a plan of study that will allow for a direction of work. Students are responsible for making and firing their own work.

32.501 ADVANCED CERAMICS II

3 semester hours

Students intensify their study of selecting a specialized problem relating to the experiences gained in Advanced Ceramics I.

32.502 ADVANCED CERAMICS III

3 semester hours

Students continue to pursue an advanced and refined level of study in the discipline of creating an art object. A specialized problem relating to the experiences gained in the first two levels will facilitate a continuity in learning.

32.503 ADVANCED CERAMICS IV

3 semester hours

Students' work should reflect a professional and philosophical attitude. Students are required to have an exhibition of their work.

32.510 ADVANCED DRAWING I

3 semester hours

Exploration of advanced drawing techniques and involvement of personal expression and imagery are required.

32.511 ADVANCED DRAWING II

3 semester hours

Emphasis is on the development of individual themes and projects.

32.512 ADVANCED DRAWING III

3 semester hours

Focus on personal expression and imagery for potential thesis statement—self-direction and innovation.

32.513 ADVANCED DRAWING IV

3 semester hours

Concentration and production of drawings for a unified thesis statement.

32.520 ADVANCED CRAFTS I

3 semester hours

Advanced levels of experimentation with contemporary idioms in crafts design. Emphasis on highly professional concepts of form and methods and on investigation and refinement of techniques as a means of realizing significant visual statements in crafts. Individualized instruction and independent planning for each student on all four levels.

32.521 ADVANCED CRAFTS II

3 semester hours

Individual concentration on specific media and related techniques. Intense involvement with refined design schemes, systems, and variations that are oriented toward an increasingly more defined singular direction in crafts.

32.522 ADVANCED CRAFTS III

3 semester hours

Highly independent and mature involvement with advanced concepts, methods, and processes in a specific crafts direction. At this level, students should begin to develop a thesis presentation which should emerge from studio experiences, independent research, and from a wide, highly selective exposure to craft objects in museums, galleries, and private studios.

32.523 ADVANCED CRAFTS IV

3 semester hours

Continued involvement with advanced concepts in crafts. Concentration on completing final works for a one-man or a one-woman show. A definitive position paper reflecting a personal philosophy in crafts should be developed.

32.530 ADVANCED GRAPHICS I

3 semester hours

Advanced level exploration of traditional and/or experimental printmaking methods. Emphasis on personalized imagery and technical proficiency.

32.531 ADVANCED GRAPHICS II

3 semester hours

Exploration of advanced level printmaking including color and color registration procedures.

32.532 ADVANCED GRAPHICS III

3 semester hours

Focus on personalized forms for potential thesis statement. Students are expected to be innovative and proficient in the technology of printmaking.

32.533 ADVANCED GRAPHICS IV

3 semester hours

Concentration on the selected forms for a unified thesis statement.

32.540 ADVANCED PAINTING I

3 semester hours

Search into purpose of painting with specific attention to traditional methods, i.e., glazing, egg tempera, and underpainting.

32.541 ADVANCED PAINTING II

3 semester hours

Exploration and different approaches of painting for individual expression. Achieving in representational painting.

32.542 ADVANCED PAINTING III**3 semester hours**

Continued development into maturity of individual style — with emphasis on mural painting designed into architectural space.

32.543 ADVANCED PAINTING IV**3 semester hours**

Mature fulfillment of personal expression. Painting should reflect continuity of intent and style. A selection of work is prepared for exhibition and thesis.

32.550 ADVANCED SCULPTURE I**3 semester hours**

Students define in writing their level of knowledge and philosophical direction, then prepare a plan of study that allows for a direction of work. Students are responsible for the completion of show quality pieces.

32.551 ADVANCED SCULPTURE II**3 semester hours**

Students experiment while still being concerned with the concept form. At this level, more positive philosophical ideas should begin to grow and develop.

32.552 ADVANCED SCULPTURE III**3 semester hours**

Students' work should reflect a significant transition from experiments to a more definite direction in technique and aesthetic opinion.

32.553 ADVANCED SCULPTURE IV**3 semester hours**

Students produce highly professional pieces of art while maintaining an awareness of their responsibility to society. This responsibility is fulfilled by an exhibition of each student's work for their thesis.

32.580 ADVANCED PHOTOGRAPHY I**3 semester hours**

Foundations of black and white photography are presented for the advanced student. Emphasis is on the technical controls of exposure and printing, research on historical and contemporary photographers and issues, and active participation in class critiques and lectures.

32.581 ADVANCED PHOTOGRAPHY II**3 semester hours**

Students identify technical and conceptual problems and goals which they will pursue during the course. Written statement of intentions, self-evaluation of work, and a final portfolio required. Attendance at lectures and critiques is required.

32.582 ADVANCED PHOTOGRAPHY III**3 semester hours**

Proficiency in black and white exposure and printing should be apparent. Students design a semester photographic project with a finished portfolio and exhibition as final goals. Continued class participation and development of technical skills expected.

32.583 ADVANCED PHOTOGRAPHY IV**3 semester hours**

Students write a statement outlining their thesis work to be carried out during the course. A final thesis, exhibition, and portfolio are required.

32.595 DIRECTED STUDY IN STUDIO ART**3 or 6 semester hours**

Continued development of a student's involvement in one of the selected studio areas after satisfactory completion of four levels of advanced study in that area. Consent of the instructor and the department chairperson are required.

AUDIOLOGY/SPEECH PATHOLOGY**(Code 72)****72.500 MEASUREMENT OF HEARING LOSS****3 semester hours**

Study anatomy and physiology of the hearing mechanisms. Etiology of hearing losses, interpretation of audiometric evaluations, and available rehabilitative procedures discussed. Lab experience in the administration of clinical audiometric evaluation provided.

Prerequisite: 74.276, 74.376

72.502 PHYSIOLOGICAL METHODS OF AUDIOLOGY: BRAINSTEM EVOKED RESPONSE AUDIOMETRY AND ELECTRONYSTAGMOGRAPHY**3 semester hours**

Study of the electrophysiologic techniques used to assess cochlear and retrocochlear function. Review of theories and clinical applications of vestibular tests, auditory brainstem evoked responses, and electrocochleography.

72.504 HEARING AIDS AND AUDITORY TRAINING**3 semester hours**

Theoretical and clinical analyses of literature evaluated in relation to educational and other rehabilitative measures available to individuals with serious organic and nonorganic hearing problems. Study, interpretation, and evaluation of modern instruments and tests included.

72.506 EXTERNSHIP: CLINICAL PRACTICUM IN AUDIOLOGY I**3 semester hours**

Hearing losses and deafness affecting the personal and socio-economic adjustment of individuals evaluated and treated through supervised study and experience. Externships may be arranged in approved private and public institutions.

72.508 EXTERNSHIP: CLINICAL PRACTICUM IN AUDIOLOGY II**3 semester hours**

See course description for 72.506

72.510 RESEARCH IN AUDIOLOGY**3 semester hours**

Analysis, interpretation, and study are made of selected problems in audiology and related disciplines that may include education, psychology, otology, rehabilitation, and other fields.

72.514 SEMINAR IN AUDIOLOGY: INDUSTRIAL AND PUBLIC HEALTH AUDIOLOGY**3 semester hours**

Problems and programs of hearing conservation in public institutions and industries with special emphasis on problems of differential diagnosis. Educational and social implication of hearing impairment in children is discussed in conjunction with appropriate rehabilitative procedures.

72.516 SEMINAR IN AUDIOLOGY:**AUDITORY PROBLEMS IN CHILDREN****3 semester hours**

Congenital and acquired hearing impairment in children examined with special emphasis on problems of differential diagnosis. Educational and social implication of hearing impairment in children discussed in conjunction with appropriate habilitative procedures.

72.518 SEMINAR IN AUDIOLOGY:**THEORETICAL AND CLINICAL MASKING****3 semester hours**

Neurophysiological and acoustic basis of problems of masking in auditory measurement explored and training offered in clinical masking procedures.

72.520 EDUCATIONAL AUDIOLOGY**3 semester hours**

Deals with the diagnostic and rehabilitative aspects of audiology in the educational setting. The effects of hearing loss on speech and language development, the use of amplification in the schools, and educational audiology alternative and models examined.

72.522 AURAL REHABILITATION:**THEORY AND PRACTICE****3 semester hours**

Habilitation/rehabilitation of the hearing impaired including auditory training, speech reading, hearing aids, assistive listening devices, communication strategies, and counseling. Emphasis on the sensory capabilities (auditory, visual, tactile, and auditory-visual training) of the hearing impaired with practicum lab.

72.524, 72.525, 72.526, 72.527, 72.528**INTERNSHIP IN AUDIOLOGY:
CLINICAL PRACTICUM****3 semester hours**

The Speech, Hearing, and Language Clinic is an integral part of the teaching-training program of the Department of Communication Disorders. The clinic provides outpatient diagnostic and therapeutic services for persons of all ages with speech, hearing, and language problems, including students, other members of the university community, and residents of the Bloomsburg area. It serves as an extension of the classroom where students can apply and study evaluational procedures, therapeutic methods, techniques and materials, and classification and etiology of speech and hearing disorders. The clinic provides students with an opportunity to relate text and lecture information to actual clinical cases under the close supervision of certified staff. Students gain experience in all aspects of remediation—diagnosis, therapy, counseling, and report writing—with a wide variety of clients.

**72.530 FUNDAMENTALS OF GRADUATE
AUDIOLOGY****3 semester hours**

Designed for graduate students who are not audiology majors such as, but not limited to, students of speech pathology, education of the hearing impaired, reading, nursing, or special education. Presents a synopsis of the primary concepts in diagnostic and rehabilitative audiology. An attempt will be made to relate the possible implications of the audiological topics to each of the fields of study listed above.

**72.532 ELECTRONICS AND INSTRUMENTATION
IN AUDIOLOGY****3 semester hours**

For solving practical equipment problems and understanding the operation of equipment used in clinical practice and hearing services.

72.550 ADULT APHASIA**3 semester hours**

Study of language disorders in brain injured adults. Areas of concentration include the history of aphasia, the neurological basis for aphasia, symptomatology of aphasia, associated problems, intelligence and aphasia, the evaluation of language and nonlanguage functions, and current rehabilitative procedures.

72.552 PRESCHOOL LANGUAGE**3 semester hours**

A review of normal language acquisition with primary emphasis on the application of developmental information to the diagnosis and habilitation of language disorders in children.

72.554 STUTTERING**3 semester hours**

The development, diagnosis, and treatment of stuttering disorders with equal emphasis on academic understanding and clinical management.

72.556 PHONOLOGY**3 semester hours**

Examines language based disorders of articulation. Emphasis is on identification, description, and remediation of phonological disorders. Generative and natural phonological processes are discussed.

72.558 CLINIC I**3 semester hours**

The Speech, Hearing, and Language Clinic is an integral part of the teaching-training program of the Department of Communication Disorders. The clinic provides outpatient diagnostic and therapeutic services for persons of all ages with speech, hearing, and language problems, including students, other members of the university community, and residents of the Bloomsburg area. It serves as an extension of the classroom where students can apply and study evaluational procedures, therapeutic methods, techniques and materials, and the classification and etiology of speech and hearing disorders. The clinic provides students with an opportunity to relate text and lecture information to actual clinical cases under the close supervision of certified staff. Students gain experience in all aspects of remediation—diagnosis, therapy, counseling, report writing—with a wide variety of clients.

72.560 VOICE DISORDERS**3 semester hours**

The diagnosis and clinical management of functional and organic voice disorders.

**72.562 LANGUAGE DISORDERS OF SCHOOL
CHILDREN****3 semester hours**

An exploration of disorders of later language acquisition and the interaction of language disorders with academic achievement, especially in the acquisition of literacy skills. Diagnostic assessments and treatment approaches are developed.

72.564 OROFACIAL AND SPEECH DISORDERS**3 semester hours**

The course concentrates on orofacial structured deficits and their effect on speech. Specific attention is given to clefts of the palate and repalate and their sequelae on speech.

72.566 CLINIC II**3 semester hours**

See course description for 72.558.

72.568 SPEECH HABILITATION IN THE SCHOOLS**3 semester hours**

Examines the profession of speech/language pathology in a school setting as it interacts with the other school-related disciplines. Emphasis is placed on facilitating of communication among the disciplines.

72.570 ADULT II - SECONDARY LANGUAGE DISORDERS**3 semester hours**

Study of secondary disorders of language in adults. Special emphasis on disorders of right hemisphere damage, dementia, and schizophrenia.

72.572 AUGMENTATIVE COMMUNICATION**3 semester hours**

Course explores the field of augmentative communication and non-speaking persons. Topics include candidacy issues, assessment, vocabulary configuration, symbol selection, and communication interaction training for language board and electronic device users. Course examines current research practices and studies in communication interaction patterns of non-speaking individuals.

72.574 SEMINAR IN COMMUNICATION DISORDERS**3 semester hours**

Selected theoretical and clinical areas of communication disorders and related disciplines. Selected areas may include clinical and research topics pertaining to student needs.

72.576 CLINIC III**3 semester hours**

See course description for 72.558.

72.578 NEUROMUSCULAR SPEECH DISORDERS**3 semester hours**

Etiology, diagnosis, and treatment of organic factors are subjects of intensive study. Emphasis is on articulatory abnormalities of speech processes caused by cerebral palsy and adult neurological impairments. Implications of disorders for developmental age levels are considered.

72.580 COMMUNICATION DISORDERS OF THE TRAUMATICALLY HEAD INJURED**3 semester hours**

Study of the nature of traumatic head injuries, emphasizing assessment and treatment of resultant communication disorders.

72.582 RESEARCH IN SPEECH AND LANGUAGE PATHOLOGY**3 semester hours**

Application of clinical and non-clinical research literature to the solution of treatment problems encountered in speech and language pathology.

72.584 FIELD EXPERIENCE I**3 semester hours**

Special clinical problems of clients are considered through advanced study and experience. Externships in approved institutions or schools. Problem areas and student practicums must be approved by a graduate adviser.

72.586 FIELD EXPERIENCE II**3 semester hours**

See course description for 72.584.

**BIOLOGY
(Code 50)****50.411 RADIATION BIOLOGY****3 semester hours**

Studies effects of radiation on living organisms; nuclear structure; fundamental properties of radiation; physical, chemical, and genetic effect on plants and animals from cells to whole organisms; application of radiochemicals in biological studies. Minimum of 4 hours per week including laboratory.

Prerequisite: 50.232, 50.233, 53.141, or consent of the instructor

50.431 EVOLUTION**3 semester hours**

Studies the major concerns of the theory of evolution and contributions toward their solutions made by genetics, paleontology, systematics, and ecology. 3 hours lecture per week

Prerequisite: 50.110 or 50.120; 50.332 recommended

50.432 MICROBIAL GENETICS**3 semester hours**

A genetic analysis of microbes to provide insights into the molecular basis of gene action using viruses, bacteria, and lower eukaryotes. Topics include DNA and chromosome structure, gene organization and expression, genetic recombination, plasmids, transposons, and recombinant DNA. 3 hours lecture/seminar a week.

Prerequisite: Consent of the instructor or two of the following courses—52.341 Biochemistry, 50.242 General Microbiology, 50.332 Genetics

50.441 CYTOGENETICS**3 semester hours**

The structure and behavior of chromosomes and their effects on development. Human genetic syndromes are described in reference to the effects of chromosome abnormalities on phenotype. The relationship between chromosomes, oncogenes and cancer is explored. Laboratory studies include microscopic techniques, cell structure methods, and karyotype preparation. 2 hours lecture, 2 hours laboratory per week.

Prerequisite: 50.332 or 50.333; or consent of the instructor.

50.450 MYCOLOGY**3 semester hours**

A critical survey of the kingdom Fungi with emphasis on the Ascomycota, Basidiomycota, Deuteromycota. Lectures cover morphology, physiology, biochemistry, cytology, genetics, systematics, ecology, and evolution. Laboratory sessions stress comparative morphology of higher fungi, laboratory techniques, and field mycology. 2 hours lecture/3 hours laboratory per week.

50.454 ETHOLOGY**3 semester hours**

Presents a description and classification of animal behavior, its evolution and biological function. Emphasizes mechanisms underlying behavior, especially species-typical behavior. 3 hours lecture, 2 hours laboratory per week.

Prerequisite: 50.110 and 50.371 or consent of the instructor.

50.455 ENVIRONMENTAL MICROBIOLOGY**3 semester hours**

Provides a practical application of knowledge of microorganisms, their effects on our environment, methods of control, sanitation regulations, and testing procedures. Field trips taken when practical. 1 hour lecture, 4 hours laboratory per week.

Prerequisites: 50.341 or consent of the instructor

50.457 ENTOMOLOGY**3 semester hours**

Studies the physiology, morphology, behavior, classification, and general biology of the insects. A collecting period provides an opportunity for students to collect, mount, and properly display insects for study. Taxonomic emphasis limited to order and family. Equivalent to 5 hours per week including laboratory.

Prerequisite: 50.110 or consent of the instructor

50.459 ORNITHOLOGY**3 semester hours**

General biology of birds and the study of bird identification in the field by song and sight. Studies birds of this region in relation to migration, time of arrival, and nesting. 2 hours lecture, 3 hours laboratory per week. Off-campus study may be required.

Prerequisite: 50.110 or consent of the instructor

50.462 PLANT ANATOMY**3 semester hours**

Outlines recent concepts of plant anatomy and historical consideration of classical researchers. Reviews structure, function, growth, and morphogenesis of the vascular plants. Addresses composition and growth of meristems and the phenomena of subsequent tissue differentiation to increase appreciation of development events. Describes anatomical organization by developmental and comparative methods in order to explain important cell, tissue, and organ relationships. 2 hours lecture, 3 hours laboratory per week.

Prerequisite: 50.120

50.463 BIOLOGICAL PHOTOGRAPHIC TECHNIQUES**3 semester hours**

Presents theory and practice of photography as applied to biology including negative and printmaking, gross specimen photography, copying, transparencies, filmstrips, autoradiography, nature work in close-ups, photomicrography, thesis illustrations, and other special techniques. 2 hours lecture, 3 hours laboratory per week. Additional laboratory hours may be required.

50.471 MEDICAL PARASITOLOGY**3 semester hours**

Presents life history, physiology, taxonomy, and morphology of parasites of medical importance to humankind. Special attention given to clinical aspects such as pathology, symptomatology, diagnosis, prevention, and treatment. Laboratory work stresses identification of parasitic disease through living and preserved material, proper handling of specimens, and methods of profes-

sional patient interviewing.

Prerequisite: 50.110 and 52.101 or 52.111

50.472 CELL PHYSIOLOGY**3 semester hours**

Applies physical and chemical principles to cellular processes, biochemistry of cellular constituents, physiochemical environment; bio-energetics, intermediate metabolism. 3 hours lecture/discussion per week.

Prerequisite: 12 hours of biology/chemistry 52.211 or 52.231 or consent of the instructor

50.473 SYSTEMIC PHYSIOLOGY**3 semester hours**

Examines how normal body function is maintained by the precise control and integration of the specialized activities of various organ systems. 3 hours lecture, 2 hours laboratory per week.

Prerequisite: Required, 50.371 and 52.230 or 52.232 or consent of instructor. Background in algebra recommended.

50.481-489

**ADVANCED SPECIAL TOPICS,
BIOLOGY AND ALLIED HEALTH SCIENCES**

3 semester hours

Presents an area of biology or allied health. Three semester hours may be applied to the biology major, which requires the student have some background in biology.

Prerequisite: Consent of the instructor

50.511 SYSTEMATIC ZOOLOGY**3 semester hours**

Study of the diversity of the animal world and the methods and principles used to examine this diversity. 5 hours per week including laboratory.

Prerequisite: Determined by the instructor

50.521 SYSTEMATIC BOTANY**3 semester hours**

Morphology, taxonomy, and geographical distribution of vascular plants. 5 hours per week including laboratory.

50.531 DEVELOPMENTAL BIOLOGY**3 semester hours**

Study of progressive changes or transformations that occur during the existence of various plants and animals. Morphogenesis, differentiation, metabolism, and genetics control are considered. Experimental studies in the laboratory use living material obtained from the local region and living cells grown in the laboratory. 4 hours per week including laboratory.

50.532 MOLECULAR GENETICS**3 semester hours**

Study of macromolecular complexes, protein synthesis, gene regulation, and chromosome structure with emphasis on the eukaryotes. 3 hours lecture/seminar per week.

**50.551 CONSERVATION OF BIOLOGICAL
RESOURCES****3 semester hours**

Emphasis on the theory and practice of environmental conservation of biological resources and on applied ecology. Field trips to observe practices of wildlife, forest, and soil conservation. 5 hours per week including laboratory.

50.552 LIMNOLOGY**3 semester hours**

Chemical and physical aspects of lakes, ponds, and streams and the nature of their biota. Laboratory and field investigations. 5 hours per week including laboratory.

50.553 ANIMAL ECOLOGY**3 semester hours**

Animal environmental relationships considered at the levels of individuals, species, and populations, and the distribution and role of animals in communities and ecosystems. Emphasis on population ecology. Laboratory and field studies include investigation of physical and biotic aspects of the environment. 5 hours per week including laboratory.

50.554 PLANT ECOLOGY**3 semester hours**

Study of interrelationships among plants and their environments. Physical and biological factors plus human influences involved in the distribution, association, and successions of plant populations and communities are investigated. 5 hours per week including laboratory.

50.556 FIELD STUDIES IN THE APPALACHIAN MOUNTAINS**3 semester hours**

Intensive 3-week field course to master techniques of working as a field biologist in the habitats of the Appalachian Mountains. Focuses on in-depth field investigations. Students gain firsthand experience and knowledge of flora and fauna, ecological relationships, and conservation issues endemic to mountain ecosystems. The field component includes an additional cost for food and camping equipment rental.

50.557 BIOLOGY OF THE LOWER VERTEBRATES**4 semester hours**

Study of fishes, amphibians, and reptiles embracing their anatomy and physiology, evolutionary history, zoogeography, and behavior. Field and laboratory work includes collection and identification of local fauna. 6 hours per week including laboratory.

50.558 FUNGAL ECOLOGY**3 semester hours**

Provides a broad treatment of the ecology of fungi and an intensive examination of selected topics, i.e., fungal decomposition of wood, bark, and forest litter, ecology of aquatic and predaceous fungi, community structure of soil and/or dung fungi, and aspects of mycorrhizal symbioses. Laboratory stresses demonstration of basic principles, testing existing and formulating new hypotheses, and research techniques, and has a field component.

50.571 ENDOCRINOLOGY**3 semester hours**

The individual glands of the endocrine system are studied with respect to their development, morphology, function, regulation, and significance in integrating physiological activities of higher vertebrates. 3 hours lecture per week.

50.572 COMPARATIVE ANIMAL PHYSIOLOGY**3 semester hours**

A comparison of higher vertebrate adaptations to various environments with respect to regulation of body fluid volume composition, core temperature, and nitrogen metabolism. 4 hours per week.

50.591 DIRECTED STUDY IN BIOLOGY**3 semester hours**

An independent investigation, conducted under the direction of a member of the Department of Biology, in an area of biology in which the student has a particular interest. The student is encouraged to identify a problem, employ an experimental design, and analyze collected data. Study of pertinent literature is required.

50.592 MASTER OF EDUCATION THESIS**3 or 6 semester hours**

Independent research and the preparation of a formal thesis in partial fulfillment of the requirements for the degree of Master of Education in Biology.

50.593 MASTER OF SCIENCE THESIS**3 or 6 semester hours**

Independent research and the preparation of a formal thesis in partial fulfillment of the requirements for the degree of Master of Education in Biology.

BUSINESS EDUCATION**(Code 90)****90.460 BUSINESS AND OFFICE EDUCATION WORKSHOP****1-3 semester hours**

Addresses those educational ideas and experiences that encourage, support, and guide participants to acquire an increased understanding of the accumulated knowledge pertaining to the development of business skills, enhancement of business education as a profession, and determination of a business and office personnel's responsibility and role in the business world.

90.551 TEACHING STRATEGIES IN BUSINESS EDUCATION**3 semester hours**

Presents teaching-learning environments based upon instruction which is geared to involve students in the assessment of their performance according to specific criteria. An increasing degree of professionalism and teacher competency is emphasized in education today by using specific criteria for judging a teacher's effectiveness. Designed to develop teaching strategies and to evaluate the results of performance-based instruction.

90.564 BUSINESS EDUCATION PROGRAM MANAGEMENT AND DEVELOPMENT**3 semester hours**

A study of basic management and curriculum theory as it applies to business education program administration and supervision. Course approached from the perspectives of planning, organizing, staffing, directing, and controlling.

90.581 SEMINAR IN BUSINESS EDUCATION**3 semester hours**

An investigation and evaluation of completed research in business education. Students submit written reports which are used as the basis for class discussions.

90.599 MASTER'S THESIS IN BUSINESS EDUCATION**1-6 semester hours**

COMMUNICATION (Code 23)

23.501 NATURE OF COMMUNICATION

3 semester hours

A theoretical survey of the major categories of the field of communication.

23.502 INTERPERSONAL COMMUNICATION

3 semester hours

A survey of the changing roles of laws, customs, and expectations as they relate to social interaction between people of one culture or of different cultures.

23.598 MASTER'S RESEARCH PROJECT

3 semester hours

Independent research on a topic approved by the student's adviser(s).

COMMUNICATION DISORDERS (Code 74)

74.490 COUNSELING COMMUNICATIVELY DISORDERED INDIVIDUALS AND THEIR FAMILIES

3 semester hours

Designed to help students identify counseling needs of communicatively disabled individuals and their families and to provide basic, short-term counseling. Students introduced to various counseling strategies in individual and group settings as appropriate to schools and speech and hearing clinics.

74.501 INTRODUCTION TO SIGN LANGUAGE

3 semester hours

Involves a study of basic sign language vocabulary and finger-spelling techniques used in communication with hearing impaired individuals. Emphasis on developing proper expressive and receptive skills.

74.560 INTERMEDIATE SPEECH AND LANGUAGE PRACTICUM IN EDUCATION OF HEARING IMPAIRED

3 semester hours

Provides an opportunity to work with hearing impaired children and/or adults. Emphasis is on speech and language remediation of hearing impaired individuals.

74.564 SPEECH FOR THE HEARING IMPAIRED

3 semester hours

Study of the principles and techniques used in development and formation of English speech sounds by the synthetic and analytic methods with special consideration given to production, classification, and transmission of speech sounds. Supervised demonstrations and practicums are an integral part of the course.

74.565 PROBLEMS AND TRENDS IN TEACHING THE HEARING IMPAIRED

3 semester hours

Current practices and trends in education and welfare of the hearing impaired. Concerned with psychology, social adjustment, educational achievement, political and social viewpoints, learning problems, and vocational competence of hearing impaired. New techniques and methodologies.

74.566 LANGUAGE FOR THE HEARING IMPAIRED I

3 semester hours

Study of the principles and techniques used in the development and correction of language for the hearing impaired. The student is made familiar with leading systems of natural language development designed for the hearing impaired. The step-by-step development of at least one language system is an area of study for each student. Supervised demonstrations and practicums are an integral part of the course.

74.567 LANGUAGE FOR THE HEARING IMPAIRED II

3 semester hours

Study of structured approaches to teaching spoken and written language, of language assessment devices, appropriate lesson planning, etc. Supervised demonstrations and presentations are an integral part of this course.

74.568 COMMUNICATION FOR THE HEARING IMPAIRED (SIGN LANGUAGE)

3 semester hours

Study of the expressive and receptive methods of communication used by the hearing impaired with emphasis on new techniques and methodologies.

74.569 CURRICULAR SUBJECTS FOR THE HEARING IMPAIRED

3 semester hours

Practices, content, and methods of teaching school subjects to the hearing impaired are examined with emphasis on content and methods rather than theory.

74.570 PRACTICUM WITH THE HEARING IMPAIRED

6 semester hours

Hearing losses affecting the communicational, educational, and vocational adjustment of individuals are evaluated through supervised observation, clinical practice, and practicum experience. Students are assigned to approved private and public programs for the hearing impaired where they work with selected professionals in communication disorders, following the same schedules and assuming responsibilities similar to those of professionals. Arrangements relating to student interest must be approved by program adviser.

74.580 INDEPENDENT STUDY AND RESEARCH

3 semester hours

Permits students to work under close faculty guidance on library study of specified areas or on individual research projects when particular needs cannot be met by registration in regularly scheduled courses.

74.581 INDEPENDENT STUDY AND RESEARCH

3 semester hours

See course description for 74.580.

74.584 RESEARCH IN HEARING IMPAIRMENT

3 semester hours

74.599 MASTER'S THESIS

3-6 semester hours

COMMUNICATION STUDIES (Code 25)

25.445 ORGANIZATIONAL COMMUNICATION

3 semester hours

An explanation of theoretical and practical aspects of how communication patterns develop in organizations.

25.501 INTRODUCTION TO COMMUNICATION RESEARCH

3 semester hours

Overview of the fields of research in communication and an examination of the contributions of professional speech communication organizations, graduate studies, and research. Examines historical, descriptive, experimental, and evaluating research studies. A pilot thesis is required to demonstrate competency in research techniques and use of bibliographical resources.

25.502 RHETORICAL CRITICISM

3 semester hours

The nature of rhetorical criticism. The development of rhetorical theory and criticism in the 20th century.

25.503 HISTORY AND CRITICISM OF AMERICAN PUBLIC ADDRESS

3 semester hours

Evaluation and discussion of the development and application of rhetoric in America in terms of the speaker, the speech, and the times. American speakers selected from a cross section in history prestudied from the viewpoint of biographical background nature and extent of speaking, audience reaction, speaker's basic ideas, his or her preparation, arrangement and style, basic philosophy, and platform behavior.

25.504 BRITISH ORATORY

3 semester hours

Burke, Fox, Sheridan, George, Bevan, Churchill, and other orators in the 17th through the 20th centuries. Analysis of style, philosophies, effectiveness, and their contributions to rhetoric theory.

25.505 ANCIENT RHETORIC

3 semester hours

The ancient rhetoricians Aristotle and Plato, Cicero, Longinus, and Quintilian. Emphasis is on the analysis and critical concepts of these men with a study of later interpretations of their works.

25.510 CURRENT PROBLEMS IN SPEECH ACTIVITIES

3 semester hours

Current speech practices in the secondary school. Methods of initiating, improving, and expanding speech programs.

25.515 ADVANCED PERSUASION AND PROPAGANDA

3 semester hours

Techniques of attitude modification through persuasion and propaganda. Practical application of the techniques by each student.

25.520 ADVANCED ORAL INTERPRETATION

3 semester hours

Understanding and appreciation of literature through developing skill in reading aloud. Selecting, adapting, and preparing material for presentation in high school classes.

Prerequisite: Consent of the instructor

25.530 ADVANCED RADIO AND TELEVISION

3 semester hours

Practice and study of techniques of television announcing, writing (news and drama), directing, program planning, and performing. Instructional radio and television.

Prerequisite: Beginning course in radio and television

25.585 SPECIAL TOPICS IN COMMUNICATION

3 semester hours

Specialized study by the class. Subject varies by semester.

25.586 SPECIAL TOPICS IN COMMUNICATION

3 semester hours

25.587 SPECIAL TOPICS IN COMMUNICATION

3 semester hours

25.590 MASTER'S RESEARCH PAPER

3 semester hours

ECONOMICS (Code 40)

40.513 ORIGIN AND DEVELOPMENT OF CAPITALISM

3 semester hours

Transition from feudalism to capitalism and the subsequent influence of leading capitalist institutions on industry, agriculture, commerce, banking, and the social movement.

40.514 LABOR ECONOMIC THEORY

3 semester hours

The emphasis of the course is on labor economic theory and its application in analyzing the issues of employment and inflation. Topics include growth of the labor force and its composition, wage theories and wage structures, trade unionism and income distribution, economics of poverty, minimum wage, and hour laws, and civil legislation. Occupational choices, job search, labor mobility, and human capital formation also are included. Students are exposed to research and measurement methodology to meet the research requirements of the course.

40.515 PUBLIC POLICY AND BUSINESS

3 semester hours

Public policies affecting the economy: historical, philosophical, and legal basis of regulation; the rationale of free enterprise. Intensive analysis of selected areas of economic policy related to government action.

40.531 CURRENT ECONOMIC PROBLEMS

3 semester hours

Selected economic problems of current interest and concern to our society. Basic economic principles and theories and the thinking of recognized economists of the past and present as revealed in their published works.

40.532 COMPARATIVE ECONOMIC SYSTEMS

3 semester hours

A comparison of the workings and performance of the major forms of economic organization. The capitalist systems; the modern welfare states; state capitalism; communism; and socialism.

40.533 INTERNATIONAL ECONOMIC POLICIES AND RELATIONS

3 semester hours

Application of modern international economic and financial analyses to emerging contemporary problems of nations trading with one another. Selected topics include customs unions; optimum currency area; international cartels; and flexible exchange rates. Impact of governmental and intergovernmental relations and regulations.

**EDUCATIONAL FOUNDATIONS
(Code 60)**

60.451 PUPIL PERSONNEL SERVICES IN THE PUBLIC SCHOOL

3 semester hours

A comprehensive view of pupil personnel services in elementary and secondary schools; school attendance, school health programs, pupil transportation, psychological services, guidance services.

60.501 MAJOR PHILOSOPHIES OF EDUCATION

3 semester hours

Modern educational problems and trends interpreted in the light of philosophical viewpoints; study of primary sources of concepts and philosophies which have influenced and are influencing education.

60.502 SCHOOL AND SOCIETY

3 semester hours

Effects on the school program of social class, family, and community pressures and changing patterns and standards of life in our society. Course fosters understanding of these pressures and patterns so that the teacher can work effectively to encourage the good and reduce the harmful impacts of social forces in relationships of children.

60.503 HISTORY OF AMERICAN EDUCATIONAL THEORY

3 semester hours

Historical foundations of American educational theory with emphasis on individuals and schools of thought which have influenced and are influencing education in America.

60.505 COMPARATIVE EDUCATION

3 semester hours

Educational ideas and practices of various countries are examined for their impact upon our culture and education. Particular attention is given to the relationship of European educational programs to the American philosophy and practice of public education.

60.506 URBAN EDUCATION FOR THE DISADVANTAGED

3 semester hours

This course increases awareness of problems of the urban educational system. Emphasizes a growth of sensitivity to the disadvantaged youngster, in-depth examination of current research findings in areas studied, teaching strategies, and resources and approaches to resolve major problems. Discussion of polarization in critical problem areas.

60.507 USING NEWSPAPERS IN THE CLASSROOM

3 semester hours

An activity-centered course that provides an orientation to the use of the newspaper in various subject areas. Provides opportunities for the development of learning experiences.

60.512 SELECTION AND USE OF AUDIOVISUAL MATERIALS IN EDUCATION

3 semester hours

Advanced study of the role of media in the educative process. Includes critical assessment of that role, selection of equipment and materials for optimum utility, a review of contemporary literature in the field, and a production component involving advanced work in television, transparencies, slide-tape, and computer-assisted instruction.

60.514 HOME, SCHOOL, AND COMMUNITY RELATIONS

3 semester hours

An introductory course in public relations with special reference to elementary school in which a philosophy of partnership between home, school, and community is developed and principles, attitudes, and techniques to encourage community sharing in the planning of and assuming responsibility for good schools are considered.

60.520 GUIDANCE AND COUNSELING FOR EXCEPTIONAL CHILDREN

3 semester hours

Study of the needs of exceptional children in public schools (including the academically talented); guidance and counseling techniques for teachers and guidance counselors in meeting those needs; guidance and counseling for exceptional children related to the total guidance counseling program.

60.530 GUIDANCE IN THE ELEMENTARY SCHOOLS

3 semester hours

Concepts and techniques of the guidance process in the elementary school; behavioral and developmental problems; and releasing creative capacities of children.

60.533 MEASUREMENT AND EVALUATION IN THE ELEMENTARY SCHOOL

3 semester hours

Construction, administration, and interpretation of group tests of intelligence, achievement, aptitude, and personality in elementary schools.

60.534 CREATIVITY FOR TEACHERS

3 semester hours

This course helps teachers become more creative in their approaches to students and subject matter. Emphasis on understanding the creative process, recognizing the creative child, and development of the creative potential of student and teacher.

60.550 PROBLEMS IN GUIDANCE AND COUNSELING

3 semester hours

Philosophy of guidance; history of the guidance movement; guidance needs of children and adolescents; methods of gathering data; nature of school records; interpretation of test results and inventories; use of occupational information and data; interviewing and counseling techniques.

60.551 TECHNIQUES IN COUNSELING**3 semester hours**

Theories, principles, and practices of counseling; development and use of counseling materials such as test results, educational information, and other pertinent materials.

60.552 ORGANIZATION AND SUPERVISION OF GUIDANCE**3 semester hours**

Types of guidance organizations used in schools and their effectiveness in providing for good guidance.

60.561 MEASUREMENT AND EVALUATION IN THE SECONDARY SCHOOL**3 semester hours**

Construction, administration, and interpretation of group tests in intelligence, achievement, aptitude, and personality in secondary schools.

60.573 INTRODUCTION TO EDUCATIONAL ADMINISTRATION**3 semester hours**

Focuses on examination of the functions and tasks of educational administration. Issues include the evolving school setting; the meaning, development, and work of school administrators; educational systems analysis; school personnel administration; administrative and organizational behavior; and career ladders in educational administration.

60.576 SCHOOL LAW AND FINANCE**3 semester hours**

Consideration is given to the limitations established by local, state, and federal laws relating to the interactions of school personnel. Special attention to recent changes resulting from judicial decisions. Fiscal control of education with emphasis on local budgetary problems is a major objective.

60.577 EDUCATIONAL RESEARCH FOR SUPERVISION**3 semester hours**

Consideration is given to the development of ability to read and interpret educational research and apply it to a school situation. Conclusions concerning curriculum content and teaching strategies designed for the improvement of the educational process are emphasized.

60.578 GROUP PROCESSES IN SUPERVISION**3 semester hours**

Emphasis on group processes, communication in the group, and organizational goals related to educational supervision. Focuses on knowledge of and practice in laboratory experiences in group processes and applicability to supervision. Experiences provide opportunities for experimenting with and evaluating leadership skills and promote creativity and initiative.

60.579 SUPERVISION OF CURRICULUM AND INSTRUCTION**3 semester hours**

Through an examination of the objectives, techniques, and materials of staff supervision, this course defines the supervisory function directed toward the improvement of instruction with emphasis on the interrelationships between the humanistic aspects of education and democratic administrative behavior. Roles of contemporary supervision with respect to educational quality

assessment, interpersonal relations, and the catalytic role of the supervisor are studied.

60.580 SEMINAR IN SUPERVISION OF CURRICULUM AND INSTRUCTION**3 semester hours**

A field-based practicum experience that places the candidate for a Curriculum and Instruction N-12 Supervisory Certificate in a cooperative relationship with an individual in a school setting responsible for the overall planning, coordination, implementation, and evaluation of a school system curricular and instructional program. The experience is competency based. Experiences of the practicum are discussed in a weekly seminar. Evaluation of the candidate's performance is based on achievement of specified competencies.

60.581 INDEPENDENT STUDY IN EDUCATION**1-6 semester hours**

Provides an opportunity for public school teachers to pursue in-service projects in cooperation with a faculty adviser. The teacher submits a "learning contract" to an adviser designated by the department chairperson. The contract includes details of the academic goals, descriptions of the project in its relation to the goals and of a proposal for a final report, a reading list, and the proposed credit. Permission to register for the course is granted upon approval of the contract. Evaluation is based on the written report and an examination by a committee appointed by the adviser and/or department chairperson. Students may register at any suitable time; the duration of the experience is flexible.

60.583 SEMINAR IN EDUCATION**1-6 semester hours**

Provides the opportunity for a group of teachers engaged in a common in-service project to use the resources of the university and its faculty. A "learning contract" similar to that of 60.581 is submitted by the group as a basis for permission to register. Papers related to aspects of the project and to the literature designated in the contract are presented by the members for discussion and criticism in seminar meetings held under the direction of a faculty member. Evaluation is based on the seminar reports and a final comprehensive written report by the student.

60.584 CURRICULUM AND INSTRUCTIONAL THEORY, DESIGN, AND DEVELOPMENT**3 semester hours**

This is a competency-based course consisting of elements that provide a base in relevant theory associated with the activity of curriculum development. A review, critique, and evaluation of current theoretical positions and design methodology are an integral part of the course.

60.585 CURRICULUM AND INSTRUCTIONAL EVALUATION**3 semester hours**

Curriculum and instructional evaluation is a competency-based course consisting of elements providing a base for the student in current theory and practice in the evaluation of school curriculum and instruction. Reviews, critiques, and application of current thinking and practice in curriculum evaluation are an integral part of the course.

ELEMENTARY AND EARLY CHILDHOOD EDUCATION (Code 62)

62.410 WORKSHOP IN PRESCHOOL EDUCATION 1-6 semester hours

A course for teachers in-service and upper-level undergraduates. Study of selected areas in early childhood education. Individual or group study of subjects of interest or concern in teaching.

62.521 ELEMENTARY SCHOOL CURRICULUM 3 semester hours

Studies problems related to development, experimentation, and improvement of curriculum practices in the elementary school.

62.522 CURRICULUM TRENDS IN EARLY CHILDHOOD EDUCATION 3 semester hours

Studies the changing goals and the developing programs required to meet the needs of children who enter school with increased experiential background.

62.523 PRACTICES IN TEACHING THE YOUNG CHILD 3 semester hours

Examination of current practices in teaching the young child with emphasis on the developmental aspects of childhood as they relate to the school program.

62.524 KNOWLEDGE AND THE CURRICULUM IN THE ELEMENTARY SCHOOL 3 semester hours

Studies the place of knowledge in developing a curriculum. Emphasis is on content as it is influenced by innovative practices.

62.525 CURRENT PRACTICES IN ELEMENTARY SCHOOL SCIENCE 3 semester hours

Studies the problems resulting from the increased interest of children in science and the need for science instruction in the elementary grades; methods and materials for nurturing these interests and for implementing science instruction within the limits of the interests of children are presented and evaluated.

62.527 SOCIAL STUDIES IN THE ELEMENTARY SCHOOL 3 semester hours

Examination of contemporary trends and current research in the disciplines of the social sciences as a basis for development of a conceptual framework for a social studies program.

62.528 LANGUAGE ARTS IN THE MODERN SCHOOL 3 semester hours

Studies problems related to instruction in various aspects of the language arts; place of the language arts in the curriculum; current research and its practical application.

62.529 LITERATURE FOR CHILDREN IN THE ELEMENTARY GRADES 3 semester hours

Surveys ways that children may encounter literature and methods that are effective in the encounter. Students become acquainted with children's books, work with children in a storytelling experi-

ence, discover ways other than through reading by which children may experience literature.

62.530 AWARENESS OF ENVIRONMENTAL EDUCATION PROBLEMS FOR THE ELEMENTARY SCHOOL 3 semester hours

This course helps the classroom teacher organize environmental education activities. Areas of content include problem-solving activities, material sources, the use of resources, curriculum building, development of an awareness of environmental problems, and possible solutions to them. Camping and a camp fee are required.

62.531 ENVIRONMENTAL EDUCATION AWARENESS ACTIVITIES AND MATERIALS FOR THE ELEMENTARY SCHOOL 1-3 semester hours

An opportunity for students to broaden their experiences in environmental education. Camping and a camp fee are required.

Prerequisite: 62.530

62.533 VALUES CLARIFICATION IN THE ELEMENTARY SCHOOL 3 semester hours

This course is primarily for elementary education students. It emphasizes the philosophy and composition of values clarification as it applies to the elementary school child. Practical and theoretical aspects stressed as well as techniques for helping children to build a value system by which they can live. Emphasis on methods which aid the teacher in becoming aware of the emotional needs of children, humanizing of the education process, and improvement of working/learning relationships with others.

62.539 CURRENT TOPICS IN ELEMENTARY EDUCATION 3 semester hours

An investigation of current thinking and research in aspects of elementary education.

62.581 INDEPENDENT STUDY IN ELEMENTARY EDUCATION 1-6 semester hours

Comparable to 60.581.

62.583 SEMINAR IN ELEMENTARY EDUCATION 1-6 semester hours

Comparable to 60.583.

62.590 CURRENT RESEARCH AND DEVELOPMENT IN EARLY CHILDHOOD EDUCATION 3 semester hours

Examination of recent literature and experimental work in early childhood education—preschool, kindergarten, primary. Characteristics of the learner, learning environment, learning materials, and innovative programs. Departmental paper and/or curriculum projects initiated in this course.

62.591 LEARNING AND DEVELOPMENT OF THE YOUNG CHILD 3 semester hours

Surveys child development and its relationship to the early school years. The development of the young child from age two through eight.

**62.592 IDENTIFICATION AND PRESCRIPTION
OF THE NEEDS OF YOUNG CHILDREN**

3 semester hours

A course in the techniques of identifying the physical, emotional, social, and mental needs of young children and in developing appropriate prescriptive procedures.

**62.593 ORGANIZATION AND ADMINISTRATION
OF EDUCATIONAL PROGRAMS FOR YOUNG
CHILDREN**

3 semester hours

Studies the various programs in early childhood education with emphasis on the expansion and administration with regard to the selection of personnel, evaluative techniques, and curriculum procedures, school law, finance, and other appropriate subjects.

**62.594 PRACTICUM IN EARLY CHILDHOOD
EDUCATION**

6 semester hours

An individually prescribed course of study and activity based on (but not limited to) previous experience and academic achievement. Consent of program coordinator and department chairperson required.

**62.595 INDIVIDUALIZED INSTRUCTION—
PRINCIPLES AND PRACTICES FOR THE
CLASSROOM**

3 semester hours

Analyzes practices, principles, and procedures for individualizing instruction. Experiences include procedures for adapting conventional instructional modes to individualized settings.

62.599 MASTER'S RESEARCH PAPER

3 semester hours

Students demonstrate their ability to employ accepted methods of educational research in the solution or intensive study of some problem area of interest or concern to him or her. The problem area selected for the research project must be related to the curriculum that the student is pursuing.

**FINANCE
(Code 96)**

96.454 FINANCIAL MANAGEMENT DECISIONS

3 semester hours

Studies business financial problems and the development of advanced financial management practices as used in the decision-making role of the financial manager.

96.535 FINANCIAL MANAGEMENT

3 semester hours

In-depth study of management activities involved in the financial aspects of business enterprise. Theoretical knowledge gained through exposure to financial management literature is applied to problem situations through the use of case studies and simulation techniques. Emphasis on the development of perspective in the decision-making process with the acquisition of tools to facilitate effective decision making.

**96.550 SECURITY ANALYSIS AND PORTFOLIO
MANAGEMENT**

3 semester hours

An advanced treatment of aspects involved in developing a logical

and systematic approach to analyzing and evaluating types of securities. Investment strategy and management of an investment portfolio. Theoretical aspects of security analysis and problems involved in analyzing and evaluating securities within the context of the type of industry issuing them.

96.565 SEMINAR IN FINANCE

3 semester hours

Seminar on unresolved problems in the field of finance with investigations to include models for financial decision making, money and capital markets, and simulation problems.

**HISTORY
(Code 42)**

**42.472 HISTORY OF LABOR IN THE UNITED
STATES**

3 semester hours

Surveys the emergence and development of organized labor from the post-Civil War period to the present. A third of the course is devoted to an analysis of contemporary labor-management problems and labor's changing role in our increasingly technological society.

Prerequisite: 3 semester hours in history

**INFORMATION PROCESSING
(Code 92)**

92.550 INFORMATION PROCESSING

3 semester hours

A comprehensive introduction and basic orientation to the use of information processing in the educational environment. Students required to investigate the impact of the computer and associated peripheral devices on the classroom. Emphasis on the effective use of available computer resources.

92.554 MANAGEMENT INFORMATION SYSTEMS

3 semester hours

Studies information analysis and systems design from the user's point of view. Students identify the basic concepts of systems point of view, organization as a system, information flows, and nature of management information systems. Data bases and data base management systems will be investigated from the manager's perspective.

**INTERDISCIPLINARY STUDIES
(Code 09)**

09.401 HISTORY AND POLITICS OF THE USSR

3 semester hours

Provides sufficient background in history and political science to enable students to better understand the USSR. It encompasses some of the major developments in the Soviet Union since 1917 employing lectures, films, slides, guest speakers, readings, and discussion.

09.427 SOCIALISM: THEORY AND HISTORY

3 semester hours

Surveys socialist philosophies from Biblical times to the present concentrating on the theories of Marx, Engels, Lenin, and Mao

and including a review of the major historical events surrounding socialist development.

09.580-589 SPECIAL TOPICS

1-3 semester hours

Special Topics provides an opportunity for graduate students from any graduate program to expand their knowledge from a previously learned experience or to explore a new learning experience not offered on a regular basis. Each course carries from 1 to 3 semester hours. Prerequisites are determined by the instructor.

09.590 GRADUATE INTERNSHIP

1-6 semester hours

Provides a work-study experience initially administered by an academic faculty member and a sponsoring employer. The course provides the opportunity for an internship experience across disciplines at a graduate level.

09.599 MASTER'S THESIS

3-6 semester hours

MANAGEMENT

(Code 93)

93.440 SMALL BUSINESS INSTITUTE SEMINAR

1-3 semester credits

Provides graduate credit for students participating in the College of Business' Small Business Institute Program as well as experience in applying theoretical concepts to practical decision-making business problems.

93.457 BUSINESS AND SOCIETY

3 semester hours

This course examines the responsibility a business has to the society in which it operates. It combines traditional business theory with current developments. A macromanagement framework is developed for analyzing the interacting environmental forces that influence how managers and organizations meet their social responsibilities.

93.511 STATISTICAL ANALYSIS

3 semester hours

Statistical principles and procedures basic to research in business and interpretation of data.

93.512 MANAGERIAL ECONOMICS

3 semester hours

Economic analysis of the firm and its environment. Determination of prices, output, and employment.

93.560 OPERATIONS MANAGEMENT

3 semester hours

Analysis of manufacturing and service systems and application of decision making of operational policy problems.

93.561 OPERATIONS PLANNING AND CONTROL

3 semester hours

Examination of research findings in operational management with focus on the operation and control of the system.

Prerequisite: 93.560

93.562 ORGANIZATION THEORY

3 semester hours

Comparative examination of major approaches to the study of organizations theories and research findings are applied to practical situations. Topics include systems of power and influence, organization structure, organizational conflict and cooperation, individual motivation, group process, behavioral science research and its implications on management.

93.563 OPERATIONS RESEARCH IN BUSINESS

3 semester hours

Construction and use of quantitative models in business decision making.

93.566 ORGANIZATION BEHAVIOR

3 semester hours

Focuses on internal organizational issues with recognition given to personal and external organizational background factors. Deals with the human aspects of organization, spotlighting the group and the individual. Includes the findings and conceptual models of those who have conducted empirical behavioral research and the behaviors of class members. Includes concepts of roles, norms, cohesive and divisive processes. Explores social and status aspects of self-concept, personal perception, goals, feelings, ego, responsibility, decisions, conditioning, and personal functioning.

93.581 POLICIES

3 semester hours

Examines complex industrial situations to determine the best strategies to insure a firm's long-run survival and growth in competitive markets. Emphasizes problem-solving skills, implementation of optimal decisions, nature of strategic analysis including selected cases involving production, pricing, capital investments and its interaction with other factors.

93.583 HUMAN RESOURCE MANAGEMENT

3 semester hours

Focuses on current research and theory related to management and development of human resources in organizational settings. Emphasis on basic principles of behavior, motivation, training and development, leadership, and performance in organizations.

MARINE SCIENCE

(Code 55)

55.431 ECOLOGY OF MARINE PLANKTON

3 semester hours

Study of phytoplankton and zooplankton in marine and brackish environments. Qualitative and quantitative comparisons made between the plankton populations of various types of habitats in relation to primary and secondary productivity.

Prerequisite: 50.110 and 50.120

55.500 PROBLEMS IN MARINE SCIENCE

3 semester hours

Graduate students may pursue one of the following options:

Option A – Students may take a 200, 300, or 400 level course offered at the Marine Science Center in which they desire advanced work and complete, in addition to the regular course requirements, an approved project in the area under the direction of the instructor. Written permission from the instructor is required.

Option B – Independent Research Project. In order to be admitted to Option B, a student must submit a research proposal to the academic committee of the Marine Science Consortium. The proposal must include the scope and duration of the proposed research, equipment and facilities required, and a recommendation and approval from the student's academic adviser.

Students must receive written permission for graduate credit acceptability from the chairperson of the graduate committee of the Department of Biological and Allied Health Sciences before registering. Copies of this approval and the instructor's permission must be forwarded to the academic director of the Marine Science Center before the student arrives on station to take the course.

55.540 ENVIRONMENTAL SCIENCE EDUCATION 3 semester hours

A field-oriented approach to environmental education with special emphasis upon coastal zones. Students relate their own disciplines to education for quality environments. Consideration will be given to sources, facilities, methods, techniques, and concepts used in environmental education.

55.570 RESEARCH CRUISE – BIOLOGY 3 semester hours

A three-week session involving detailed planning and preparations for an oceanographic research cruise of approximately eight days, actual execution of the cruise plan on board an ocean research vessel, and data-processing techniques and instrumentation used by biological oceanographers are introduced.

Prerequisite: 55.241 or its equivalent, or permission of the instructor

MARKETING (Code 97)

97.551 MARKETING MANAGEMENT

3 semester hours

Application of the managerial process of analysis, organization, planning, and control to marketing activities: marketing concepts analysis of marketing opportunities, growth and competitive strategy, marketing information systems, buyer behavior, and product development.

MASS COMMUNICATIONS (Code 27)

27.511 TELEVISION PRODUCTION AND DESIGN

3 semester hours

Focuses on the practical aspects of planning and producing video tapes for specific instructional purposes. Covers pre-production planning, production activities, and post-production editing.

MATHEMATICS and COMPUTER SCIENCE (Code 53)

53.575 COMPUTER PROGRAMMING FOR INSTRUCTIONAL APPLICATIONS

3 semester hours

Fundamental concepts of the BASIC programming language are used to provide a foundation for the design and development of processes needed for the production of instructional computing programs.

53.576 COMPUTER GRAPHICS FOR INSTRUCTIONAL APPLICATIONS

3 semester hours

Sequel to 53.575 where techniques for creating color, graphics, and sound are examined and applied to the development of instructional computing programs.

53.577 PASCAL FOR INSTRUCTIONAL APPLICATION

3 semester hours

A thorough study of the fundamental concepts and applications of the structured programming language Pascal provides the skills essential for the design of instructional computing materials.

53.578 DESIGN OF INSTRUCTIONAL SYSTEMS USING PASCAL

3 semester hours

Applies the concepts and skills covered in 53.577 primarily to the design and development of instructional learning episodes and, secondly, to the design of instructional support systems.

53.580 PROGRAMMING FOR INTERACTIVE VIDEO 3 semester hours

The fundamental concepts of an author language/system are used to provide for the design and development of computer-based courseware that integrates interactive video, audio, computer-generated text, and graphics.

53.592 SPECIAL TOPICS

3 semester hours

NURSING (Code 82)

82.501 RESEARCH

3 semester hours

Prepares students to critique, utilize, and extend nursing research findings, to improve the quality of health care and health care delivery. Principles and strategies inherent in scientific inquiry, critical evaluation, and the research process are applied throughout the course. Focuses on the identification of a researchable problem in clinical nursing practice; the conduct of an extensive review and critique of relevant literature; the formulation of a conceptual or theoretical framework to guide the study; and the selection of an appropriate research design and methodology. Students plan, develop, and present a research proposal using appropriate scholarly format and style.

Prerequisites: Undergraduate courses in research design and statistics.

82.502 CONCEPTUAL MODELS IN NURSING 3 semester hours

Explores theory building and levels of theory, the relationship of models to theories, the elements of a model, and major conceptual models in nursing practice. Students conduct an in-depth analysis of one specific conceptual model in nursing, as well as design a model for advanced nursing practice in their area of clinical specialization.

82.503 ROLE THEORY AND DEVELOPMENT IN NURSING PRACTICE

3 semester hours

Examines theoretical formulations related to roles and role devel-

opment and their applicability to the functional role development of the clinical specialist. Students use concepts, principles, and strategies inherent in a variety of theories (i.e. systems, change, and role) to serve as a framework for the development and enactment of the subroles of practitioner, educator, researcher, manager, and consultant. Leadership principles are employed as students identify an actual or potential issue or problem related to a component of the clinical nurse specialist role and design a proposal for planned change.

82.504 PHYSICAL ASSESSMENT

3 semester hours

Focuses on broadening students' knowledge and perspective of physical assessment of individuals across the life span. Learning experiences are provided to develop a systematic approach to physical assessment with synthesis of cognitive knowledge and psychomotor skills. Emphasizes the wellness component of physical assessment with reference to major health deviations.

82.505 ADVANCED PATHOPHYSIOLOGY

3 semester hours

Presents selected aspects of genetic, biochemistry, physiology, and pharmacology as applied to advanced nursing practice. Embryonic, histologic, and gross anatomical features of certain organ systems are functionally related to biochemical and physiological mechanisms essential for the maintenance of a stable internal environment. Some deviations from normal metabolism, structure, and function are considered.

Prerequisites: Undergraduate anatomy and physiology, biochemistry, pharmacology, one year of nursing clinical practice.

82.510 PSYCHIATRIC/MENTAL HEALTH NURSING I

6 semester hours

Focuses on the role development of the clinical nurse specialist in psychiatric/mental health nursing practice. Students synthesize theoretical formulations derived from nursing and related disciplines to serve as bases for advanced knowledge and skills used in the promotion, maintenance, and restoration of the optimal health of individuals, groups, families, and communities. An increased mastery of skills and expertise in the use of the nursing process in maximizing this optimal wellness of clients unfolds as students progress through the course. A humanistic interactionism perspective provides for a holistic focus on clients and emphasizes the "therapeutic use of self" by the student practitioner. Principles and strategies inherent in leadership behavior are employed as students work independently and collaboratively with clients and health care providers in their multifaceted roles as practitioners, teachers, researchers, consultants, and managers. A weekly seminar session provides opportunities for students to analyze the impact of current trends and issues on contemporary practice and to formulate strategies to effect positive change.

Prerequisites: 82.501, 82.502, 82.503, candidacy for M.S.N.

82.511 COMMUNITY HEALTH NURSING I

6 semester hours

Focuses on advanced professional practice in the multifaceted roles of the community health clinical specialist. Students employ advance knowledge and skills derived from an analysis of nursing theories, models, and community health nursing practice in implementing health promotion, maintenance, and restoration strategies with high-risk individuals, families, and community aggregates in a variety of health care settings. Students assume leadership roles in working independently and interdependently

with clients and health professionals to improve the quality of health care delivery. A weekly seminar session provides opportunities for students to analyze the impact of current trends and issues on contemporary practice and to formulate strategies to effect positive change.

Prerequisites: 82.501, 82.502, 82.503, candidacy for MSN

82.512 ADULT HEALTH AND ILLNESS NURSING I

6 semester hours

Focuses on the role development of the clinical nurse specialist in adult health and illness nursing practice. Students examine and synthesize theoretical formulation in nursing and related disciplines to serve as bases for advanced knowledge, skills, and values used in the promotion, maintenance, and restoration of the optimal health of adult individuals and families. Increased mastery of skills and expertise in utilizing the nursing process with adult clients, families, and the interdisciplinary health team in the promotion of optimal levels of wellness develops throughout the course. Evaluation and refinement of a conceptual model provide for holistic care of adult clients. Leadership principles and strategies are employed as students collaborate and independently practice with adult clients, families, and the interdisciplinary health team in developing the multifaceted roles of practitioner, educator, consultant, researcher, and manager. Research skills and process enhanced through seminar presentations, clinical practicum, and course assignments aimed at improving the quality of adult health care. Client advocacy and change process through social and political action encouraged in order to affect the adult health care delivery. Weekly seminar affords students participation in analyzing current trends and issues of contemporary advanced nursing practice and in evaluating formulated strategies for positive change.

Prerequisites: 82.501, 82.502, 82.503, 82.504, and 82.505, candidacy for M.S.N.

82.513 MANAGEMENT AND ORGANIZATIONAL BEHAVIOR IN ADVANCED NURSING PRACTICE

3 semester hours

Explores the concepts of organizational style and the theories of management behavior related to the role of the clinical nurse specialist in advanced practice. Focuses on leadership theories, strategies for maturation and change, concepts of power and influence, and organizational decision making.

Prerequisite: Consent of the instructor

82.514 INDEPENDENT STUDY

3 semester hours

Student works with a faculty preceptor in conducting an individualized study related to a particular area of clinical interest.

82.530 PSYCHIATRIC/MENTAL HEALTH NURSING II

6 semester hours

Emphasizes independent, self-directed learning and designed to facilitate further assimilation of theory and research in advancing the students' bases of knowledge, skills, and processes in professional practice as psychiatric/mental health clinical nurse specialists. In clinical practice, students employ leadership behavior in promoting expertise in their multifaceted roles as clinical nurse specialists. Students conduct structural and organizational analyses and serve as consultants in planning, designing, and effecting change to improve the quality of health care delivery in psychiatric/mental health nursing. Weekly student-conducted seminars focus on the identification and proposed resolution of problems,

issues, and concerns in their role enactment as clinical nurse specialists in the advanced practice of psychiatric/mental health nursing.

Prerequisite: 82.510

82.531 COMMUNITY HEALTH NURSING II

6 semester hours

Builds upon Practicum I and provides the student opportunity for advance professional practice in a variety of community settings in the multifaceted roles of the community health clinical nurse specialist. Focuses on analysis of risk factors of existing and/or potential health problems as they occur at the community level. As students evolve in the roles of the clinical nurse specialist, they assume positions of responsibility, functioning both independently and collaboratively with clients and other health professionals in improving the quality of health care delivery in the community. Weekly faculty/student-conducted seminar sessions emphasize aspects of health planning to meet health needs of communities. Opportunity is provided for the application of theory to practice as students analyze problems, issues, and concerns in professional practice as a community health clinical nurse specialist. Clinical practicums in a variety of community settings are arranged relative to course objectives and the student's areas of need and desired practice by mutual agreement among faculty, students, and appropriate agency personnel.

Prerequisite: 82.511

82.532 ADULT HEALTH AND ILLNESS NURSING II

6 semester hours

Concentrates on advanced professional nursing practice as a clinical nurse specialist within a specialized area of adult health and illness through independent, self-directed learning. Through self-directed learning, the student is facilitated to assimilate additional theory and research in advancing the students' knowledge, skills and values in advanced clinical nursing practice for adult clients. Students enhance their expertise in the multifaceted roles of the clinical nurse specialist in adult health and illness by assuming leadership positions in a health care setting and by functioning both independently and collaboratively with clients, family, other health professionals, and community in improving the quality of adult health care delivery. Weekly student-conducted seminars focus on the analysis of current concepts, practices, trends, issues, and research in their role enactment as clinical nurse specialists in the advanced practice of adult health and illness.

Prerequisite: 82.512

82.533 MANAGEMENT AND ORGANIZATIONAL BEHAVIOR IN HEALTH CARE DELIVERY SYSTEM

3 semester hours

Seminar format that explores model building and the future directions of organizational structures for advanced nursing practice. Organizational theory provides the framework for organizational characteristics and identifying the organizational strategies and structures with greatest potential for promoting effective performance and organizational growth. Focuses on organizational environments and planned change in the health care delivery system. Course may be taught in another country to provide international aspects due to the nature of the content.

Prerequisite: Consent of the instructor

82.590 THESIS

3-6 semester hours

The development and presentation of a formal thesis in the student's area of clinical specialization.

Prerequisite: 82.501

OFFICE SYSTEMS

(Code 94)

94.500 INTRODUCTION TO OFFICE SYSTEMS AND INFORMATION

3 semester hours

An overview of office systems—people, technology, and procedures within organizational and environmental contexts. Course provides an understanding of the evolving role of the office as a key information systems center.

94.510 OFFICE SYSTEMS APPLICATIONS

3 semester hours

Applications of office automation technologies to enhance productivity of office employees of all levels from support personnel to managers. Hands-on experience includes comparative and selective techniques for hardware and software, as well as an evaluation of appropriate training materials for support personnel.

Prerequisite: 94.500 or consent of instructor

94.520 ADMINISTRATIVE OFFICE COMMUNICATIONS

3 semester hours

Provides application of communication skills for those professionals who work in environments with automated information and communication systems. Topics include oral and written reports, systems-related documents (reports, proposals, procedures), research methods, and information technology.

Prerequisite: 94.500, 94.510 or consent of instructor

94.530 OFFICE TELECOMMUNICATIONS SYSTEMS

3 semester hours

Introduction to telecommunications in the business environment. Topics include telephony, data codes, protocols, network architectures, local area networks, communications media, hardware, and software. Management issues and practical applications are an integral part of the course. Emphasizes the application of telecommunications to facilitate information interchange in whatever form the information takes: voice, data, text, and image.

Prerequisite: 94.500 or consent of the instructor

94.540 TRAINING AND DEVELOPMENT IN OFFICE SYSTEMS

3 semester hours

Applies theories of learning and instructional procedures to education and training of employees in office systems. Topics include instructional design, strategies, technology, and implementation, evaluation, and management of training with the organizational structure.

Prerequisite: 94.500, 94.510 or consent of the instructor

94.550 INTEGRATED OFFICE SYSTEMS

3 semester hours

Capstone course of office systems curriculum. Includes a synthesis and an application of concepts related to current office systems topics.

Prerequisite: 94.500, 94.540 or consent of the instructor

PHYSICS
(Code 54)

54.421 SOLID STATE PHYSICS

3 semester hours

Physical properties of matter in the solid state. Basic quantum concepts, crystal structure, electrons in metals, electrical conductivity, semiconductors, band theory, and the p-n junction. Dielectric and magnetic properties of matter.

54.422 THERMODYNAMICS

3 semester hours

Concepts and principles of classical thermodynamics. Thermodynamics of simple systems. Introduction to kinetic theory and statistical thermodynamics.

54.450 INTRODUCTION TO QUANTUM MECHANICS

3 semester hours

Introduction to the fundamentals of quantum and wave mechanics beginning with a review of quantum radiation theory and proceeding through the Schroedinger presentation. Treatment includes one dimensional potential function, the harmonic oscillator, and the hydrogen atom.

Prerequisite: 54.311, 54.314; Mathematics 53.322

54.480 HISTORY OF PHYSICAL SCIENCE

3 semester hours

An account of the development of physical science from the time of Copernicus to the present with attention to the nature of scientific investigation, assumptions, constructs, and models and the interaction of science with other thinking.

54.501 MATHEMATICS FOR TEACHERS OF PHYSICAL SCIENCE

3 semester hours

Basic mathematical techniques of physics and chemistry with applications appropriate to teachers of the physical sciences. Methods of trigonometry, calculus, and vectors at a level to follow first-year college mathematics.

54.510 ELEMENTS OF CLASSICAL MECHANICS AND WAVES

3 semester hours

Review and extension of basic concepts and methods in the mechanics of particles and objects, wave motion, and kinetic theory.

54.511 ELEMENTS OF CLASSICAL ELECTRICITY AND OPTICS

3 semester hours

Review and extension of basic concepts and methods in electricity and magnetism and optics.

54.512 ELEMENTS OF MODERN ATOMIC AND NUCLEAR PHYSICS

3 semester hours

Review and application of the modern concepts of relativity, quanta, radiation, and wave mechanics to atomic and nuclear physics.

54.520 APPLIED ELECTRONICS

3 semester hours

Construction and characteristics of electronic devices such as amplifiers, oscilloscopes, meters, and transducers and their use in

acquisition, processing, and display of scientific data. Theory integrated with laboratory experience.

54.530 MODERN ADVANCED LABORATORY

3 semester hours

Laboratory work with modern instrumentation of intermediate sophistication in various areas such as nuclear radiation, magnetic field effects, vacuum, mass spectroscopy, nuclear magnetic resonance, lasers, and interferometry.

54.540 CURRENT APPLICATIONS OF MODERN PHYSICS

3 semester hours

Application of principles and methods of modern physics to selected current topics of significance and probable classroom interest. Examples: lasers and holography, nuclear energy, cosmology, and solid state semiconductors.

54.550 MATHEMATICAL METHODS OF THEORETICAL PHYSICS

3 semester hours

Development and use of mathematical concepts and techniques appropriate to further study in graduate-level physics. Vector calculus, differential equations, complex variables, special functions. Fourier analysis, etc.

54.552 THEORETICAL PHYSICS FOR TEACHERS

3 semester hours

Development of more sophisticated theoretical aspects of such basic areas of physics as electromagnetic radiation, mechanics, particles and waves, quantum mechanics, fields.

Prerequisite: 54.550 or equivalent

54.560 RECENT DEVELOPMENTS IN HIGH SCHOOL PHYSICS

3 semester hours

Consideration of modern programs including PSSC Physics and Harvard Project Physics covering course content, laboratory work, philosophy, and method of teaching.

54.561 RECENT DEVELOPMENT IN JUNIOR HIGH SCHOOL SCIENCE

3 semester hours

Consideration of modern programs including ISCS and IPS covering course content, laboratory work, philosophy, and method of teaching.

54.570 INDEPENDENT STUDY

1-3 semester hours

Individual investigation (laboratory or theoretical) of an area of special interest following a plan consistent with the resources of the department and approved before registration by a supervising instructor. Semester hours depend on the magnitude of the study.

54.592 MASTER'S PAPER IN PHYSICS

3 semester hours

An extended paper presenting, from a novel aspect, results of an in-depth study of a topic or area in physics. May include lab work. Consent of the instructor required for registration.

54.599 PHYSICS RESEARCH

3-6 semester hours

Experimental and/or theoretical research leading to a thesis that shows new knowledge or original scholar.

POLITICAL SCIENCE (Code 44)

44.405 THE DEVELOPMENT OF POLITICAL THOUGHT

3 semester hours

A chronological survey from the ancient Greeks to the present undertaken to present the ideas of seminal political thinkers as they grappled with perennial problems.

44.409 AMERICAN POLITICAL THOUGHT

3 semester hours

Analyzes the relationship of American political thought to contemporary political science by using traditional materials in an historical, chronological way but reworking them to show their relation and relevance to actions and institutions. Included are the main ideas of the leading political thinkers in America from the Colonial period to the present.

44.437 PUBLIC ADMINISTRATION APPLICATIONS

3 semester hours

Puts into practice the theory of public administration by using simulations and cases.

(Offered spring semester only.)

44.438 PUBLIC PERSONNEL ADMINISTRATION

3 semester hours

Examines public service as a career, the personnel needs of national and local governments, civil service law, personnel systems, and current problems.

44.440 THE PRESIDENT AND CONGRESS

3 semester hours

Reviews presidential and congressional politics, public policy-making roles, executive-legislative relationships, constitutional issues. Examines problem areas and proposals for reform.

44.446 CONSTITUTIONAL LAW I

3 semester hours

Analyzes the evolution, structure, and function of the Supreme Court, concentrating on a case study approach of the court's interpretations of the powers of the president, Congress, and federal-state relationships.

(Offered fall semester only.)

44.447 CONSTITUTIONAL LAW II

3 semester hours

Studies the decisions of the Supreme Court as they are related to the individual and the government, concentrating on nationalization of the Bill of Rights, rights of persons accused of crimes, equal protection, and voting rights.

(Offered spring semester only.)

44.448 JUDICIAL PROCESS

3 semester hours

Studies policy-making by the federal courts, primarily the Supreme Court. The nature of the policy-making function as well as the impact of policy-making on American society are analyzed.

44.452 STATE AND LOCAL GOVERNMENT AND POLITICS

3 semester hours

Presents a description and analysis of state and local legislatures, executives, and judiciaries; the myths and realities of state and

local politics; intergovernmental relations; current policies and problems.

(Offered spring semester only.)

44.458 U.S. FOREIGN POLICY

3 semester hours

Analyzes substance, methods, and purposes of U.S. foreign policy including the determinants of policy, policy-making machinery, and implementation matters.

44.463 THE U.S.S.R. POLITICAL SYSTEM

3 semester hours

Studies history, development, ideology, structure, process, institutions, and policies of the Soviet political system.

44.464 GOVERNMENT AND POLITICS OF IRELAND

3 semester hours

Surveys historic, social, cultural, and religious developments in Ireland with concentration on a study of the government and politics of Northern Ireland and the Irish Republic. Examines contemporary literature, drama, music, and art.

44.487 INTERNATIONAL LAW AND ORGANIZATIONS

3 semester hours

Presents the theoretical and practical implications of the legal and organizational efforts to regulate international relations with emphasis on international law, the United Nations, the International Court of Justice, and regional and functional organizations.

44.490 INDEPENDENT STUDY IN POLITICAL SCIENCE

3 semester hours

Provides for individualized reading, research, and reporting under conditions of minimal supervision. Projects must have departmental approval and be underway by the end of the first week of a session.

44.491 READINGS IN GOVERNMENT AND POLITICS

3 semester hours

Topics selected on the basis of close consultation between instructor and student. Designed for either group or individual study.

44.492 SEMINAR IN GOVERNMENT AND POLITICS

3 semester hours

Examines selected government and politics in an attempt to review and unify theories and methods of political science. Emphasizes individual research projects.

44.496 FIELD EXPERIENCE IN POLITICAL SCIENCE

1-6 semester hours

Provides for supervised individual or group activities including internships of a nonclassroom variety in applied areas of political science.

PROFESSIONAL STUDIES (Code 79)

79.591 RESEARCH IN EDUCATION

3 semester hours

Studies methods and techniques used in educational research; development and interpretation of statistical data and application to professional problems.

PSYCHOLOGY (Code 48)

48.406 PSYCHOLOGY SEMINAR

3 semester hours

Provides for an advanced consideration of significant topics in psychology. Requires reports and discussions of current research and may be repeated with change in topic.

Prerequisite: 48.101 and consent of the instructor

48.436 THEORIES OF PERSONALITY

3 semester hours

Provides a critical study of theories explaining development, structure, and organization of personality. Considers personality from psychoanalytic, social, individual, self, and learning points of view.

Prerequisite: 48.101

(Offered fall semester only.)

48.451 LABORATORY TRAINING IN GROUP PROCESSES

3 semester hours

Offers on-going experience on topics including norm-setting, leadership, problem solving, role playing cooperation/competition, and decision making. Class size limited to 20 students.

Prerequisite: 48.101 and consent of the instructor

(Offered spring semester only.)

48.453 ORGANIZATIONAL PSYCHOLOGY

3 semester hours

Describes the application of psychological theory and research to the study of industrial, business, profit, and nonprofit service, military, and governmental organizations. Emphasizes the interaction of individual perceptions, group dynamics, and organizational climate and strategies to maximize the satisfaction and effectiveness of each component within and between complex organizations.

Prerequisite: 48.101, 48.251

(Offered spring semester only.)

48.464 ADVANCED EXPERIMENTAL DESIGN

3 semester hours

Presents an advanced consideration of the planning, conduct, and evaluation of research in the behavioral and biological sciences, employing parametric and nonparametric statistics. Emphasizes inferential statistics, design, analysis, interpretation, and computer utilization.

Prerequisites: 48.101, 48.160, 48.281, 48.282, or consent of the instructor

48.466 INDEPENDENT STUDY IN PSYCHOLOGY

3 semester hours

Studies a topic via either review and research of technical psychological literature or empirical manipulation of variables in the field or laboratory under supervision of a psychology faculty member resulting in a written report of its outcome.

Prerequisites: Consent of the instructor and departmental approval.

48.497 PSYCHOLOGY PRACTICUM

1-15 semester hours

Provides application of psychological knowledge through study, observation, and practice in a community, college, or business setting. May be repeated for a total of 15 semester hours.

Prerequisites: Consent of the instructor

48.525 INDIVIDUAL INTELLIGENCE TESTING

3 semester hours

Analyzes the nature and rationale of various individual tests of intelligence. Provides skills and methods in administering tests and in scoring, interpreting, and reporting results.

48.576 THEORIES OF HUMAN LEARNING

3 semester hours

Studies the historical and contemporary learning systems and models which yield principles for practical application.

READING (Code 63)

63.540 INTRODUCTION TO THE TEACHING OF READING

3 semester hours

Examines trends in reading instruction; development of competence in the use of different approaches to the solution of reading problems.

63.541 DIAGNOSIS AND PRESCRIPTION IN READING REMEDIAL READING DIFFICULTIES

3 semester hours

Diagnostic and remedial procedures emphasizing both standardized and informal techniques, analysis of extreme reading disabilities, preparation of a case study, stress of corrective and remedial procedures, and a working knowledge of how to write prescriptions for clients with reading problems.

63.542 PSYCHOLOGICAL ASPECTS OF READING

3 semester hours

Psychological foundations of learning theories, their relationship to reading, their subsequent effect on reading achievement.

63.543 READING CLINIC I

3 semester hours

Clinical experience in the diagnosis and remediation of reading and/or learning disabilities; diagnosis, development, administration, and evaluation of individual programs; case studies.

Prerequisites: 6 semester hours selected from 63.541, 63.548, and 63.542 plus consent of clinic director

63.544 READING CLINIC II

3 semester hours

Clinical experience in the development of reading skills and comprehension with persons who may or may not have remedial and/or learning disabilities. Combined with 63.543 gives experience with all levels. Continued evaluation of individual programs, case studies.

Prerequisites: 6 semester hours selected from 63.541, 63.542, and 63.548 plus consent of clinic director

63.545 ORGANIZATION, ADMINISTRATION, AND SUPERVISION OF READING PROGRAMS (K-12)

3 semester hours

Course for reading personnel, specialists, supervisors, and administrators who will or may become involved with the supervising and programming responsibilities of a reading program. Includes discussion of types of federal and/or school reading programs as well as a summary of the requirements of ESEA Titles, and how to write a federal program.

63.546 READING IN THE CONTENT AREAS**3 semester hours**

Designed for teachers of grades 4 to 12. Procedures and materials presented in word perception, special reading and study skills, vocabulary development, dictionary skills, and library techniques.

63.547 SEMINAR IN READING**3 semester hours**

Independent work in the study of recent research in the field of reading as it is applied to the departmental paper. New curricular, materials, and procedures of teaching reading.

63.548 LEARNING DISABILITIES AND READING INSTRUCTION**3 semester hours**

Designed for the reading specialist and/or reading supervisor. Language disorders as a factor in learning. Perceptual abilities, i.e., auditory and visual modalities for learning disabilities. Reviews recent research in the area of learning disabilities.

63.549 TEACHING READING TO THE HEARING IMPAIRED/LANGUAGE-HANDICAPPED CHILD**3 semester hours**

Principles, practices, methods, and materials of teaching reading to the hearing impaired/language handicapped; discussion, reading, clinic practices with clients, and library research.

SECONDARY EDUCATION**(Code 65)****65.530 INSTRUCTIONAL DEVELOPMENT IN MIDDLE AND JUNIOR HIGH SCHOOLS****3 semester hours**

Inquires into the role of early secondary education by analyzing historical trends, curricular patterns, instructional designs, and personnel structure of this organization unit. Emphasis on teacher behavior, student values and attitudes, and instructional designs peculiar to junior high, middle, and intermediate schools.

65.560 DEVELOPMENT OF THE SECONDARY SCHOOL CURRICULUM**3 semester hours**

Problems related to development, experimentation, and improvement of curriculum practices in the secondary school.

65.571 EVALUATING TEACHING IN MIDDLE AND SECONDARY SCHOOL**3 semester hours**

Improvement of instruction through self analysis. Micro-teaching techniques, planning dimensions, self-appraisal techniques. Designed for teachers with special reference to the work of cooperating teachers.

65.581 INDEPENDENT STUDY IN SECONDARY EDUCATION**1-6 semester hours**

See course description for 60.581.

65.583 SEMINAR IN SECONDARY EDUCATION**1-6 semester hours**

See course description for 60.583.

SOCIOLOGY**(Code 45)****45.441 SOCIAL INDICATORS****3 semester hours**

Attempts to reinforce and extend earlier learning in research techniques and methods by focusing upon systematic step-by-step understanding, analysis, and preparation of social indicators at the federal, state, and local levels of social policy planning and analysis. Promotes understanding of social indicators and the use of these indicators within all levels of society.

45.443 SOCIOLOGY OF DEVIANT BEHAVIOR**3 semester hours**

Evaluates the presence and function of deviance in society. Includes mental illness and various types of crime and stigmatized behavior. Examines how it is handled therapeutically and legally through institutionalization and treatment. Attempts to provide a broad theoretical perspective as well as concrete examples of deviance in any society. Examines current methods of rehabilitation and punishment.

45.450 SOCIAL WORK PROCESSES II**3 semester hours**

Utilizes problem-solving interventions in small groups integrating social work knowledge, skills, and values.

(Offered fall semester only.)

45.451 FAMILY COUNSELING**3 semester hours**

Surveys the major theoretical models for family assessment and intervention with primary emphasis on ecological systems. A working knowledge of rudimentary assessment and intervention skills for problem solving with families is acquired.

45.453 SOCIAL WELFARE POLICY**3 semester hours**

Frameworks for analyzing social and economic policies presented with special focus on legislative, judicial, and administrative policies.

(Offered spring semester only.)

45.465 COMPUTER APPLICATIONS IN THE SOCIAL SCIENCES**3 semester hours**

An introduction to computer use for the social sciences (through use of SPSS). Emphasizes translating questions into data analysis and interpretation of statistical results.

Prerequisites: 45.260 or similar statistics course

(Offered spring semester only.)

45.467 POPULATION PROBLEMS**3 semester hours**

Studies human population, its major theories, distributions composition, changes, and future developments of population, and impacts of population problems on society as influenced by vital processes.

45.468 SOCIAL SERVICE PLANNING**3 semester hours**

Provides an advanced consideration of the social context of the development of social policy, planning, and implementation of social and/or human services at federal, state, and local levels of organization. A critical analysis of the social effects of social

policy, planning, and services on people in a service-oriented, post-industrial society.

45.474 CONTEMPORARY ENVIRONMENTAL ISSUES

3 semester hours

Examines some major human problems that lead to environmental deterioration, particularly, water, air, and noise pollution, energy and other resource depletion, and increasing population density.

45.490 SOCIOLOGY OF AGING

3 semester hours

Studies aging, its major theoretical themes, patterns of living, socio-psychological and cultural consequences of aging. Examines the contemporary issues, problems, and programs of the aging.

45.500 SOCIOLOGY OF MASS COMMUNICATION

3 semester hours

In-depth discussion of cognitive and behavioral affects of mass media, especially television on audiences, the social structure of communications industry, particularly its influence on media content and the political use of mass media. Students critique the latest research articles in the field.

45.511 SOCIAL INSTITUTIONS

3 semester hours

Sociological examination of major institutions in the U.S. cross-culturally compared with those in other societies. Specific institutions selected depending on the interest of students and faculty.

45.513 ADOLESCENTS IN AMERICAN SOCIETY

3 semester hours

Studies the role of adolescents in contemporary U.S. society with special emphasis on the adolescent's social interactions in groups and institutions.

45.523 THE CONTEMPORARY AMERICAN COMMUNITY

3 semester hours

An advanced examination of the social dynamics of community life, its institutions, organizations, and people within the context of the development of post-industrial society.

45.525 CURRENT SOCIAL ISSUES

3 semester hours

Analyzes current social issues and solutions offered to solve them. Explores issues and solutions within the broad framework of the social sciences and specific framework of sociological and anthropological data.

SPECIAL EDUCATION (Code 70)

70.432 LANGUAGE II

3 semester hours

Aids the student in preparing to teach exceptional individuals basic and refined written language skills. Includes methods and materials for teaching penmanship, spelling, syntactical structure, and reading.

70.450 METHODS FOR ELEMENTARY SPECIAL EDUCATION

3 semester hours

Presents fundamental principles for a variety of teaching tech-

niques applicable to the range of elementary levels of special education. Organization of programs, curricular approaches, and materials for the special education teacher.

70.451 METHODS FOR SECONDARY SPECIAL EDUCATION

3 semester hours

Presents a student-centered workshop approach in analysis of methods, research, and philosophies currently in use in the teaching of special education students. Provides practice in the use of various teaching aids and machines related to student projects in secondary special classes.

70.455 LEARNING DISABILITIES

3 semester hours

Studies characteristics and symptoms of specific learning disorders. Students are introduced to diagnostic and educational procedures used with learning disorders. Emphasizes perceptual and conceptual factors in the development of language skills. For individuals who have not had a course in learning disabilities.

70.490, 70.491, 70.492

SPECIAL WORKSHOP I

1-6 semester hours

Temporary special workshop seminars designed to focus on contemporary trends, topics, and problems in the field of special education. Lecturers, resource speakers, team teaching, field experience and practicum, new media, and related techniques. Usually are funded projects.

70.501 ADMINISTRATION AND SUPERVISION OF EDUCATION FOR EXCEPTIONAL INDIVIDUALS

3 semester hours

Application of the fundamental principles of school administration and supervision to the areas of exceptionality and to problems unique to each. School law, teacher recruitment, in-service education, organization and integration of special education and ancillary services, evaluation of special provisions, and finance as these bear on special education.

70.502 MENTAL RETARDATION

3 semester hours

Intensive review of research pertaining to etiology of mental retardation, classification systems, and diagnosis. Includes study of brain injury, familial retardation, research on learning characteristics, and evaluation of psychological tests. Criteria distinguishing mental retardation from other problems.

70.505 SEMINAR IN LEARNING DISABILITIES

3 semester hours

Facilitates an in-depth study of the behavioral characteristics and cognitive development of children with specific learning disabilities. Intended for students seeking a master's degree with concentrated emphasis in learning disabilities. Enrollment limited to students with the necessary prerequisites and the approval of the instructor.

70.516 PSYCHOLOGY OF EXCEPTIONAL INDIVIDUALS

3 semester hours

Symptomatology, personality formation and developmental and therapeutic consideration for the exceptional individual.

70.517 EDUCATION OF THE GIFTED INDIVIDUAL
3 semester hours

Principles and practices that are modifying school programs to conserve and develop to the optimum degree the capabilities of the more able individuals. A study is made of teaching techniques and devices used effectively in both the elementary and the secondary school.

70.518 IDENTIFICATION AND EVALUATION IN GIFTED/TALENTED EDUCATION
3 semester hours

Provides information that will assist students to become familiar with physical, mental, emotional, and social characteristics of the gifted/talented and to use formal and informal assessment devices and procedures to identify, evaluate, and classify the gifted/talented so that appropriate individual educational programs may be provided for them. Covers ways of developing informal assessments, gathering, and storing observational information and classifying gifted/talented students according to individual educational needs.

70.519 CURRICULUM AND PROGRAM DEVELOPMENT IN GIFTED/TALENTED EDUCATION

3 semester hours

Provides comprehensive theoretical and practical approaches to teaching gifted/talented individuals to in-service teachers, administrators, interested parents, and others. Presents a variety of approaches that can be combined or integrated into a unique plan to fit each individual's needs.

70.520 CURRICULUM AND MATERIALS FOR THE MENTALLY RETARDED/PHYSICALLY HANDICAPPED

3 semester hours

Presents the latest curricular approaches to, and methods and materials used in, teaching mentally retarded and physically handicapped individuals. Exposure to current public school and residential curricula and to teaching techniques and materials used to implement these curricula.

70.526 VOCATIONAL WORK STUDY PROGRAMS
3 semester hours

Investigation and analysis are concerned with manual skills at various departmental levels. Research criteria and information are applied to job performance and adjustments and to the community and to job opportunities. Experience is provided in job analysis for skills involved and in surveying job adjustments of handicapped adults.

70.532 COMMUNICATION DISORDERS OF EXCEPTIONAL INDIVIDUALS

3 semester hours

Review of research and analysis of language and speech development in relation to intellectual development, cultural background and other influences, criteria and techniques for developing language and speech in the special class, role of speech correctionist and others to teachers.

70.544 DIAGNOSTIC AND REMEDIAL TECHNIQUES
3 semester hours

Diagnostic and remedial techniques and instruments used with children in special education programs. Critical evaluation of applicability of each to the child in relation to causes and condi-

tions of exceptionality. Development of skills in interpreting and writing case histories and reports in selection and application of remedial techniques and evaluation of progress.

Prerequisite: Course in tests and measurements or its equivalent.

70.552 PROJECTS IN SPECIAL EDUCATION

3 semester hours

Designed to further a student's own interest and competency in an area of special education for the exceptional child. Library research or individual projects involving service to the exceptional person may be agreed upon and conducted under supervision of a staff member.

70.554 DISORDERS OF WRITTEN COMMUNICATION

3 semester hours

Designed for students with at least a minimal background in the area of written language, i.e., decoding and encoding processes. Reviews the development and acquisition of reading, spelling, and writing. In-depth study of specific disorders, etiological factors, developmental, and remedial techniques and practices. Specific topics for scholarly research papers determined according to individual needs, experience, and interest. Students required to demonstrate proficiency in all aspects of written language.

70.559 SEMINAR IN EDUCATION OF EXCEPTIONAL INDIVIDUALS

3 semester hours

Research oriented and devoted in its entirety to problems in the education of exceptional individuals. The problems may be theoretical and practical. Consideration is given to those that are of individual interest to the student.

70.560 NEUROLOGICALLY IMPAIRED INDIVIDUALS
3 semester hours

Terminology necessary to interpret diagnostic reports, classroom techniques for managing brain-injured individuals, preparation to work with individuals with specific learning disabilities that are related to neurological dysfunction and concomitant behavior.

70.562 PROBLEMS OF INDIVIDUALS WITH IMPAIRED MOTOR DEVELOPMENT

3 semester hours

Gives the students information and experience with the problem of individuals with educationally relevant motor disabilities. Covers normal motor development; formal and informal assessment of motor skills and problems; developmental and corrective preschool and elementary school programs; conditions resulting in severe motor disabilities, self-care, academic, and psycho-social aspects of physical disability; prevocational, and vocational adjustment of the physically handicapped; and current issues related to research and litigation.

70.565 READING AND INTERPRETING RESEARCH IN SPECIAL EDUCATION

3 semester hours

Aids the student in reading, understanding, and evaluating the results of statistical and behavioral research carried out by others. Covers a working knowledge of basic statistical terms, an introduction to the type of research questions that can be answered by various statistical procedures, a knowledge of the basic steps of hypothesis testing, analysis and comparison of excellent and poor research designs, and the development of an ability to detect misuse of statistics.

70.570 FOUNDATIONS OF BEHAVIOR DISORDERS**3 semester hours**

An information-based course covering the characteristics of children with behavior disorders, approaches to remediation, general principles of classroom management, simulated problem solving, ideal academic models for children with behavior disorders, research findings, and sources of information.

70.571 INTERVENTION WITH BEHAVIOR DISORDERED INDIVIDUALS**3 semester hours**

A field-based experience where majors meet in class and are given assignments to perform in their classrooms. Observations are made, and feedback is provided. Results of interventions are shared in group class sessions, and strategies are multiplied for all.

70.572 SEMINAR ON BEHAVIOR DISORDERS**3 semester hours**

A regularly scheduled seminar group composed of those who have completed the first two courses in the master's behavior disorders sequence. The groups deal with reading new research and discussing implications for applications, as well as future directions, moral issues, and more advanced systems of management and instruction.

70.590 DIAGNOSTIC AND TEACHING PRACTICUM IN LEARNING DISABILITIES**3 semester hours**

Provides the opportunity to work in a structured setting on a one-to-one and small group basis. Practicum is the culminating activity wherein the teacher applies the knowledge previously acquired in academic courses through the interpretation of diagnostic reports, evaluating children's needs, planning, and carrying out programs and making recommendations for each child's future educational program.

70.591 PRACTICUM IN TEACHING THE MENTALLY RETARDED AND PHYSICALLY HANDICAPPED**3 semester hours**

A practicum course facilitates in-service training for teachers who are currently certified to teach the mentally retarded and physically handicapped. Students select an area of primary interest, and under closely supervised conditions (by the instructor), conduct the project as part of their professional assignment. Permission to register for the course must be obtained from the instructor assigned to supervise the practicum.

70.592 INTERVENTION IN GIFTED/TALENTED EDUCATION**3 semester hours**

Facilitates practical training of individual's interested in acquiring a gifted/talented master's degree. Students, under close supervision by department faculty, select an area of interest and contract for a project that enables them to demonstrate a mastery of a set of competencies considered germane to the objectives of the course. Requires permission from the instructor to supervise practicum.

70.595 INTERNSHIP**3 semester hours**

Internship in special education. Supervision to take place in schools or educational situations under supervision of the local supervisor and graduate faculty.

70.599 MASTER'S RESEARCH PAPER**3-6 semester hours**

Opportunity to employ accepted methods of educational research in the solution or intensive study of some problem area of interest or concern. The problem area selected for the research project must be related to the exceptional person.



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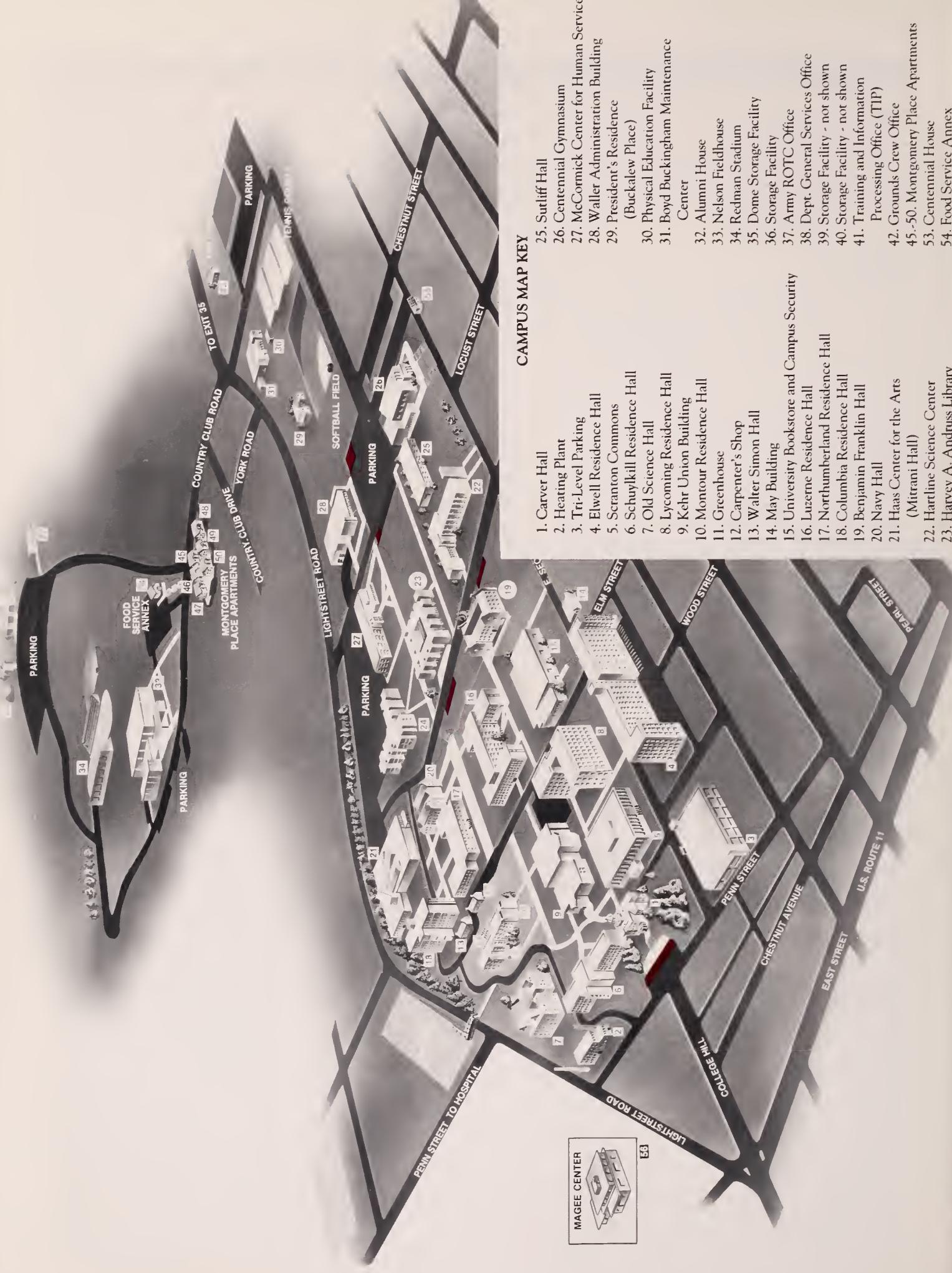
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CAMPUS MAP KEY

1. Carver Hall
2. Heating Plant
3. Tri-Level Parking
4. Elwell Residence Hall
5. Scranton Commons
6. Schuykill Residence Hall
7. Old Science Hall
8. Lycoming Residence Hall
9. Kehr Union Building
10. Montour Residence Hall
11. Greenhouse
12. Carpenter's Shop
13. Walter Simon Hall
14. May Building
15. University Bookstore and Campus Security
16. Luzerne Residence Hall
17. Northumberland Residence Hall
18. Columbia Residence Hall
19. Benjamin Franklin Hall
20. Navy Hall
21. Haas Center for the Arts
(Mitrani Hall)
22. Hartline Science Center
23. Harvey A. Andrus Library
24. Bakeless Center for the Humanities
25. Sutliff Hall
26. Centennial Gymnasium
27. McCormick Center for Human Services
28. Waller Administration Building
29. President's Residence
(Buckalew Place)
30. Physical Education Facility
31. Boyd Buckingham Maintenance
Center
32. Alumni House
33. Nelson Fieldhouse
34. Redman Stadium
35. Dome Storage Facility
36. Storage Facility
37. Army ROTC Office
38. Dept. General Services Office
39. Storage Facility - not shown
40. Storage Facility - not shown
41. Training and Information
Processing Office (TIP)
42. Grounds Crew Office
- 45.-50. Montgomery Place Apartments
53. Centennial House
54. Food Service Annex
56. Magee Center



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